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REVIEW OF THE SECOND SEVEN YEAR PLAN PROGRAM

OF

IRAN

MARCH 10,1960

BY

DIVISION OF ECONOMIC AFFAIRS (ECONOMIC BUREAU)
PLAN ORGANIZATION. TEHRAN IRAN

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Plan Organization
Managing Director's Office
Teheran

March 15, 1960

Dr. Khodadad Farmanfarmaian
Director, Division of Economic Affairs
Plan Organization
Teheran, Iran

Dear Dr. Farmanfarmaian:

Thank you for your letter of March 10, 1960 transmitting the Program Review. You and the members of the Division are to be congratulated on the results of your efforts which will be of great value to our current work, and even more, to the task which lies ahead in formulating the Third Plan.

Although we have not fully discussed all the recommendations in this report, I consider this Review to be of such general value that its publication at this time is hereby authorized.

With respect to the point you mention regarding the necessity to deal extensively with the problems and difficulties of the Seven Year program, I am indeed mindful of this fact. I consider, however, that our accomplishments speak for themselves; and I would hope that publication of this report will signify our attitude that this organization is ready and willing to examine frankly and publicly all its operations. Plan Organization work is public business, and the people of Iran have a right to be informed.

Sincerely yours,

Khosrow Hedayat
Deputy Prime Minister
for Plan Organization

March 10, 1960

His Excellency Khosrow Hedayat
Deputy Prime Minister
for Plan Organization
Plan Organization
Tehran, Iran

Dear Mr. Hedayat:

It gives me great pleasure to submit herewith the Program Review of the Second Seven Year Development Plan of Iran.

This study was undertaken pursuant to instructions of Mr. A. H. Ebtehaj over a year ago. This presentation is a summary of over 2,000 pages of analysis of Plan Organization development activity, as well as that of other Government agencies.

In preparing this Review, the Division of Economic Affairs of Plan Organization (Economic Bureau) has had the full cooperation of all Operating Divisions, Budget and Technical Bureaus of the Plan Organization. Without this cooperation the Review would not have been completed successfully.

I sincerely hope that this study fulfills the purposes of providing an objective evaluation of the Second Seven Year Development Plan and exploring the possible lines of approach which might be followed in preparation of the country's Third Development Plan.

I request your permission to release this document for publication.

Sincerely yours,

Khodadad Farmanfarmaian, Director
Division of Economic Affairs

PROGRAM REVIEW

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FORWORD

This review of the Plan Organization program was undertaken by the Division of Economic Affairs (Economic Bureau) in compliance with the directive of the Managing Director of the Plan Organization.

The purposes of the review can be summarized as follows:

a To evaluate the Seven Year Plan Program from the viewpoint of its actual and potential contribution to the economic and social growth of Iran;

b. To provide a basis for reprogramming the Second Seven Year Plan for the period 1338 to mid-1341 (the remaining half of the Plan period); and

c To explore the possible lines of approach which might be followed in preparation of the Third Development Plan for Iran.

The present document is a summary of the full Program Review report which contained over 2000 pages The conclusions and specific judgements expressed in this document have served as a basis of the recent reprogramming of the current Plan Although this summary is the first formal submission of the Program Review report as a whole, most of the conclusions and recommendations expressed here are already known to the Management and staff of the Plan Organization (This review was completed as of October, 1959, and does not reflect program changes beyond that period).

In the process of evaluating the programs and projects of the Second Seven Year Plan, it was necessary to consider the relation of these programs and projects to the activities of other government agencies as well as to the investment efforts of the private sector Accordingly, the Program Review has partially covered related aspects of the economy of Iran, as well as the Plan Organization programs themselves However, the main purpose of the review has been a critique of the activities of the Second Seven Year Development Plan of Iran.

It should not be difficult to appreciate that this report necessarily devotes considerable space to describing and analyzing the difficulties, problems and shortcomings of Plan Organization programs rather than to documenting the achievements and successes of the development effort. In this respect the present report does not render justice to the efforts of those men and women who, with continuous hard work and unfailing devotion, have created out of almost nothing an organization which, after only three years of experience, has managed successfully to launch a development program of this nature and magnitude

If there have been shortcomings, it is largely because the Plan Organization has been a young institution, working under conditions of extreme difficulty. Without extensive studies and surveys, without fully trained staff, and often with inadequate facilities, the Plan Organization was called upon to execute in great haste a large and extensive program. Lacking many of the necessary means, Plan Organization was assigned the task of satisfying the pressing and unlimited expectations which have intensified over the past decade. Despite mistakes, the Plan Organization's record is one of achievement and not of failure. Any similar development agency, operating under comparable conditions in another country, could justifiably be proud of such a record. Therefore, critical judgments of the past or present activities of the Plan Organization should not be interpreted as a lack of appreciation on our part of the difficulties which the operating units and Management confront in practice. These difficulties, which arise as a result of the complications of planning, inadequately trained manpower, and institutional problems, are common of most countries in the process of development and we are fully aware of them. But at the same time, unless such difficulties and problems are discussed openly and candidly, and conscientious attemps are made to resolve them, there could be little hope of improvement. Our sincere wish is that our work may prove to be of some help to those who carry the burden of responsibility for decision-making and for executing the country's development program.

Throughout this report, the main obstacle to a faster rate of economic and social development of the country has been found to be the lack of a coordinated and comprehensive national plan. It has been found that either many government agencies have been engaged in carrying out similar programs independent of the plans and targets of others, or important programs have been omitted, or little regard has been given to the need for a schedule of priorities and complementary investments. This question lies at the heart of the issue of achieving greater efficiency of investment and better use, over time, of Iran's resources. Clearly only a coordinated and self-conscious drive for a planned rate of growth, taking into account total resources and on the basis of clear and consistent objectives, will achieve the progress desired by all of us. It is in view of the overwhelming need for comprehensiveness in the country's development planning that we welcome the Government's recent decision to instruct the Plan Organization to formulate the country's Third Development Plan as a national plan that includes the activities of all government agencies and takes into account the activities of the private sector.

Many have contributed substantially to the preparation of this review; but the Division of Economic Affairs is solely responsible for the views, judgments, and recommendations expressed in this report. The members of the Division who contributed to this Program Review are shown in the Appendix to this report.

On behalf of all the members of the Division of Economic Affairs, I wish to thank all those who have patiently and persistently assited in this task.

Khodadad Farmanfarmaian
Director, Division of
Economic Affairs

PART ONE

GENERAL EVALUATION OF THE SECOND SEVEN YEAR PLAN AND FUTURE PLANNING NEEDS

PART ONE

GENERAL EVALUATION OF THE SECONF SEVEN YEAR PLAN AND FUTURE PLANNING NEEDS

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INTRODUCTION

The Second Seven Year Plan (1334-41) is now at mid-point and sufficient experience has been accumulated to permit a tentative assessment of the major issues and problems that have emerged. Such an assessment should help preliminary planning for the Third Plan and should provide a basis for making the current program more effective.

The economic expansion of the past four years does not yet prove that Iran has achieved a condition of economic growth that will continue and increase. Nevertheless, the rate of capital accumulation realized, as well as the indirect evidence of rising per capita consumption, are indicators that the economy is heading upward. If the development effort receives sufficient government support and leadership, a vigorous growth process is within sight

The economic problems facing government today are considerably different from those of five years ago. Then the job was quickly to restore oil production and revenues, to reestablish confidence in the economy, to stabilize the exchange rate at a proper level, and above all to get a development program under way. The first priority was to set up an organization that could effectively carry forward a large and complex development program. Starting in 1334 with only an ombryonic organization, Plan Organization by 1337 was administering such a development program and already its economic and social benefits were making themselves felt.

The problem now, and even more so over the next several years, is to work out a planning and programming approach that will help to sustain this effort and make it more effective. To this end far tighter budget and program controls are needed. Moreover, for the Third Plan, to begin in 1341, a tentative plan framework should be formulated within the next year as a basis for government discussion. Such a plan, in contrast to the present one, should have clear targets for both the rate and pattern of economic growth. Without such targets it is impossible to make sensible allocations of funds and difficult to measure progress.

The present state of the development effort can be understood much better against a review of the origin of the Second Seven Year Plan and of recent developments in the economy.

1. THE HISTORICAL BACKGROUND OF THE PLAN

A. GENERAL

The need for a social and economic development program had already been felt in Iran before the outbreak of the Second World War. After the grave economic dislocation caused by World War II, the idea of reconstructing and developing the economy through government initiative gained further ground.

It was in response to such a demand that early in 1325 two major steps were taken. The first one aimed at the reorganization of the existing government enterprises which had been started during the previous two decades and which had badly deteriorated, and the second at the establishment of an overall development plan for the postwar period. Consequently, an Industrial and Mining Bank was set up & all government enterprises, with the exception of the oil industry, Tobacco Monopoly and State Railway, were handed over to the Bank. Another body called the Planning Board was also set up to prepare a plan for the development of the country. After some deliberation, a 62 billion rial program ($1,937 million 1/) was prepared, and in, the second half of 1325 the International Bank (IBRD) was approached to finance a part of the program. The Bank, however, required details of the proposed projects and programs. In order to satisfy this requirement, the Government concluded on 25th Azar, 1325, a contract with Morrison Knudson International Company to prepare a plan that would be acceptable to the World Bank. Morrison Knudson's report, called "A Plan for the Development of Iran", was submitted in the second quarter of 1326. As the size of the proposed plan was beyond the financial resources of the Government, Dr. A. Nafici, and Iranian economist, was appointed to draw up a final plan in the light of MKI's findings.

B. THE FIRST PLAN

It was on the basis of Nafici's recommendations that the first Seven Year Development Plan received the approval of Parliament in Bahman, 1327. The revenue and expenditures envisaged in the Plan were as follows:

TABLE 1-- REVENUE AND EXPENDITURE OF THE FIRST DEVELOPMENT PLAN
(Amounts in Billion Rials)

Revenue	Amount	Percent	Expenditure	Amount	Percent
Oil Revenue	7.8	37.1	Agriculture	5.3	25.0
Sale of Gov't. Property	1.0	4.8	Roads, Railways Airports	5.0	23.8
Private Participation	1.0	4.8	Mines, Industry	3.0	14.3
			Oil Industry a/	1.0	4.8
Borrowing:			P.T.T.	0.7	3.6
BMI	4.5	21.4	Social Affairs	6.0	28.5
IBRD	6.7	31.9			
TOTAL:	21.0	100.0	TOTAL:	21.0 b/	100.0

a/ Capital for the purpose of setting up an Iranian Oil Company.

b/ In August and November, 1952, the Plan allocation was increased from 21 billion rials to over 26 billion rials.

Since about 32 per cent of the funds were to be borrowed from the IBRD and the Bank required more information, in Bahman 1327 the Government concluded a contract with Overseas Consultants, Inc. to work out a detailed plan on the basis of the Plan Act. In Mehr, 1328, OCI submitted a comprehensive report which actually did not envisage IBRD financing. Execution of the First Plan followed the discussion and revision of the recommendations of this report.

The first two years of the First Plan were spent on (a) establishing an organization that would carry out the plan and (b) reorganizing the industries which the new Plan Organization inherited from the former Industrial and Mining Bank.

Nationalization of the oil industry early in 1330, however, brought the country into acute financial straits and the execution of the Plan was considerably slowed down. With the resumption of oil revenue it was realized that the Plan Organization had to evolve a new development plan to cope with the altered circumstances resulting from this disruption. The First Plan, therefore, came to an end in Shahrivar, 1334. A survey made in Shahrivar, 1334, of the financial operations during the abortive plan period indicates the following results:

TABLE 2--FINANCIAL OPERATIONS UNDER THE FIRST PLAN (1328-1334)
(Amounts in Billion Rials)

	Planned Expenditure	Actual Expenditure	Unpaid Obligations
Agriculture	7.3	1.0	4.7
Transport	7.0	1.5	2.0
Industries-Mines	4.3	1.2	1.7
Post-Telegraph	0.7	0.0	0.0
Oil Development	1.0	0.2	0.0
Social Welfare	6.0	0.2	0.6
TOTAL	26.3	4.1	9.0

Source: Hossein Motamen, "Development Planning in Iran", *Middle East Economic Papers*, Beirut, 1956, p.105.

C. THE SECOND SEVEN YEAR PLAN

In the words of the Plan Act, the Second Seven Year Plan aims at "increasing production, developing exports, preparing public necessities within the country, developing agriculture and industries, discovering and exploring mines and subterranean resources, improving and completing means of communication, improving public health, fulfilling certain operations designed for the development of the country, raising the educational and living standard of the people and improving living conditions..." These general aims found expression in broad programs for most sectors, but little or no attempt was made to make these programs consistent with each other; furthermore, the objectives were not translated into a consistent set of clearly stated quantitative targets. The Plan, therefore, is primarily a plan for apportioning financial resources among the various sectors of the Government's own direct program.

The original appropriation for the Plan was 70 billion rials. In 1336 the Plan Organization obtained Parliamentary approval for a 20 per cent increase in allocation so that the total appropriation for the Second Plan was raised to 84 billion rials ($1.098 billion); the possibility that the program might require this additional financing had been recognized in the Plan Law.

TABLE 3-- APPROPRIATIONS UNDER THE SECOND SEVEN YEAR PLAN
(Amounts in Billion Rials)

	Total Amount	%	Committed Expenditure[a]	Planned Additional Expenditure[b]	Others[c]
1. Agriculture	18.2	26.0	6.3	9.4	2.5
2. Communications	22.8	32.6	5.4	17.5	-
3. Industries-Mines	10.6	15.1	2.7	6.8	1.0
4. Social Affairs	18.4	26.3	2.8	15.6	-
TOTAL	70.0	100.0	17.2	49.3	3.5

Source: Second Seven Year Development Plan Act.

[a] Under the Act, "programs in process".
[b] Under the Act, "programs - elements of which have been established".
[c] Under the Act, "programs - elements of which have not been established".

The fact that the planned program expenditures were increased from 21 billion rials for the Third Plan to 84 billion rials for the Second Plan must not be interpreted as a quadrupling of the expenditure in real terms on development. Allowance must be made for the rise in prices and the change in the exchange rate which had taken place in the intervening years.

As originally planned, Plan Organization would have received 88.0 billion rials from oil revenue. However, as the planned expenditure in the initial years was higher than the expected receipts from oil, interim financing arrangements had to be made. Consequently, a loan of $75 million from the IBRD was negotiated in 1335. This loan must be repaid before the end of the Plan period (mid-1341).

Late in 1337 it became clear that because of increases in costs and the addition of new projects, the program if fully carried out would require somewhat more that 113 billion rials ($1,477 million) If the original allocation of oil revenue to the Plan Organization of 88 billion rials ($1,150 billion) had been made available, additional borrowing of 25 billion rials ($327 million) would have been needed for the 113 billion rials program

In Esfand, 1336, the share of the Plan Organization from the oil revenue for the last four years of the Plan was cut from 80 per cent to 60 per cent This reduced the yield of oil revenues for the Plan to about 76 5 billion rials ($1 000 billion) and raised the loan requirement for a 113 billion rial program to 36 5 billion rials ($477 million) There was every reason to doubt that loans of this magnitude could be secured, at any rate from external sources.

D. THE REVISED PROGRAM

In Esfand, 1337, the Government again reduced the Plan's share of the oil revenue, limiting it to a minimum of $130 million (10 billion rials) in 1338, and 55 per cent of the oil revenue (net of BPC compensation) for the remaining two and a half years of the Plan On this basis, Plan Organization would receive approximately $560 million from oil revenues during the period 1338 - mid 1341 If this amount ($560 million) is added to oil income already received by the Plan Organization in 1334-1337, total receipts from oil revenues for the whole seven-year period will be approximately 65 8 billion rials($860 million) These two successive reductions in oil revenues, as indicated in the table below, have forced the Plan Organization to engage in susbtantial reprogramming for the period 1338 to mid-1341 As a result, the limits for the current Plan expenditures are now set 62/63 a about 85-87 billion rials for the seven-year period [1]; with expected receipts from external loans of 65 8 billion rials ($212 million) Of this total, $119 5 million had been borrowed by Khordad, 1338 ($47 5 million from the U S. Development Loan Fund and $72 million from the World Bank) The level of 85-87 billion rials will depend on additional financing now being sought. The revised program of 87 billion rials is given in Table 4.

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[1] At the time of writing, these figures probably represent the maximum program Plan Organization can carry in view of foreseeable resources. The size of the program is subject to uncertainties as to future loans that make it impossible to give an exact figure at this time Throughout the remainder of this report the 87 billion rial program will be referred to.

TABLE 4--PLAN ORGANIZATION REVISED SEVEN YEAR PROGRAM (Amounts in Thousand Rials)

Type of Expenditures	Actual Disbursements mid-1334 thru 1337	Estimated Disbursements 1338 thru mid-1341	Total Estimated
1. Agriculture and Irrigation	7,797,981	11,059,982	18,857,963
2. Communication and Telecommunication	11,978,681	18,429,197	30,407,878
3. Industry and Mines	4,775,440	1,968,654	6,744,094
4. Social Affairs	4,528,274	7,139,525	11,667,799
5. Regional Development	3,314,541	8,877,953	12,192,494
6. New Programs*	-	1,000,000	1,000,000
7. Not yet classified disbursement	192,997	-	192,997
8. Non-Program Disbursement (administrative expenditure & interest on loans)	1,588,679	4,500,000	6,088,679
TOTAL	34,176,593	52,975,311	87,151,904

* Manpower training, rural development, surveys and engineering for Third Plan

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The substantial downward revisions to an 87 billion rial program were based, in the first instance, on the decision that major programs and projects already begun should continue and be completed as scheduled. Many projects not yet initiated were necessirily eliminated even though some of them had considerable merit. Other projects in high priority sectors of economic and social development were retained but on a reduced basis. At the same time an attempt has been made to deal with several major gaps in the original program. Accordingly, more adequate provision was made for manpower training programs, rural development activities, and for the surveys and engineering studies needed in the preparation of the Third Plan.

(See Statistical Annex for detailed -- Chapter and Sub-Chapter -- breakdown of the Revised Program).

II. THE ECONOMY -- RECENT DEVELOPMENTS RELATED TO THE INVESTMENT PROGRAM

A. ECONOMIC GROWTH

It is not possible to quantify the contribution which the increase in development expenditure has made to the growth of the Iranian economy. However, there is no doubt that there has been a fairly substantial increase in production and consumption over the last five years. Various factors have helped to bring this expansion.

First, there was the rise in oil production and oil income, which supported a substantial increase in the expenditure of public authorities both for current purposes and on capital projects.

Secondly, there has been a growth of private investment, partly autonomous and partly in response to rising public disbursements. Moreover, some of the additional public and private investments undertaken in the course of the last few years have already been completed and have added to the current flow of output. This is true, for instance, for cement, electricity, textiles, transport, and also for agriculture, which benefited particularly from the form machinery program. Other investments (e.g. dams, ports) will come to fruition at a later date. Finally, there was a succession of bumper crops due to exceptionally good weather.

The expansion of output seems to have proceeded at a faster rate than the increase in population. The following information on important commodities shows that consumption per head and production have both risen.

TABLE 5--INDEX OF PER CAPITA CONSUMPTION a/ IN IRAN (1333-1336)
1954/1955 (1333 = 100)

	Wheat	Sugar	Tea	Tobacco & Cigar	Textile	Cement	Electricity	Kerosene
1333	100	100	100	100	-	100	100	100
1334	106	113	337	97	100	151	447	111
1335	107	133	273	122	92	183	1045	123
1336	126	120	238	140	100	248	1133	123

PER CAPITA PRODUCTION
(1333 = 100)

	Wheat	Sugar	Tea	Tobacco & Cigar	Textile	Cement	Electricity	Kerosene
1333	100	100	100	100	-	100	100	100 b/
1334	107	154	101	89	100	198	447	513
1335	102	159	107	111	109	329	1045	824
1336	121	169	108	129	115	449	1133	1108

Source: Economic Bureau. The basic data come form publications of the Ministry of Industries and Mines, and the Ministry of Customs and Monopolies.

a/ Arrived at by adding imports to domestic production and subtracting exports. It was not possible to allow for changes in stocks. Figures in both parts of the table assume a rate of populatin growth of 2.4 per cent; this figure, based on a very limited analysis of the 1335 census, may well be on the high side.

b/ Oil production.

While a part of this rise in per capita consumption is explained by the growth of imports (relative to exports), much the greater part of the gain in consumpion has come from higher domestic production. On a per capita basis, agriculture production may have risen by as much as 14 per cent over the four years of 1333 to 1336. The growth of industry has been even more marked but no reliable aggregate index is available.

As for investment, Table 6 below presents a very rough and tentative estimate of the level of gross investment in 1336 and 1337 and of the distribution of investment among industry, communications and the rest of the economy.

This estimate -- or range of estimate -- is arrived at by applying coefficients of two and three of the value of total investment goods imports in three years; in other words, the average import content of investment was considered to be one half as a maximum and one third as a minimum. If the national income is taken as 2.4 billion rials, the rate of gross investment has ranged, on the strength of these estimates, between 15 and 22 per cent of income in 1336 and between 18 and 27 per cent in 1337.

It goes without saying that these figures cannot be taken as firm estimates. They do suggest, however, that investment in Iran is now running at a fairly high rate by international standards.

TABLE 6--ESTIMATED GROSS INVESTMENT
(Amounts in Million Dollars)

	1336				1337			
	Alternatiove I		Alternative II		Alternative I		Alternative	
	Amount	%	Amount	%	Amount	%	Amount	%
Total Gross Investment a/	362	100	542	100	440	100	660	10
a. Investment in Industry b/	110	30.4	110	20.3	132	30.0	132	20.
b. Investment in Communication c/	62	17.1	62	11.4	55	12.5	55	8.
c. Others d/	190	52.5	371	68.3	253	57.5	473	71.

a/ Total gross investment is arrived at by applying, under Alternative I, a coefficient of two to the total value of investment goods imports; under alternative II, a coefficient of three is applied. The total value of investment goods imports for 1336 is taken from an Economic Bureau study of the consumption of Iran's imports, while for 1337 it is calculated on the assumption that 42.5 per cent of total imports estimated at $517 million consist of investment goods. The figure of 42.5 per cent is taken from the study for 1336 mentioned above.

b/ Based on the import of investment goods for "Industry". For 1336, the estimate is derived from the study referred to above, which divides investment goods by end use. For 1337 it was assumed that imports of investment goods for Industry bear the same relation to total imports as in 1336. Under both alternatives, in arriving at the value of investment industry, a coefficient of two is applied to the value of the import of investment goods for industry. The investment figures include the investment made by the Consortium.

c/ and d/ -- See next page.

Footnotes c/ and d/ to Table 6:

c/ Based on the investment expenditure of Plan Organization and the Government of Iran on communication. For the year 1337 Government's investment expenditure is assumed to be on the same level as in 1336.

d/ This is the residual item, which includes P O. investment in agriculture, residential buildings and public utilities.

As shown by Tables 7A and 7B, the country's expenditure on imports of investment goods and machinery has been rising sharply and almost continually in the last decade

TABLE 7A---IMPORT OF INVESTMENT GOODS[a]
(1334 = 100)

Year	Index	Increase over previous year
1327	41	--
1332	--	--
1333	70	--
1334	100	43%
1335	105	5%
1336	154	47%
1337	187 b/	21%

a/ Based on Economic Bureau of import structure of Iran. Imports of Investment goods as defined here include machinery, as well as other investment goods, such as cement, iron bars, steel, etc.

b/ Estimated

TABLE 7B---IMPORT OF AGRICULTURE AND INDUSTRIAL MACHINERY
(1334 = 100)

Year	Index	Increase over previous year
1332	47 5	--
1333	35.0	- 36%
1334	100.0	+186%
1335	125.9	+ 26%
1336	495 1	+293%
1337	644 1	+ 30%

Source: BMI figures on the clearance of Letters of Credit.

Although prices have gone up over this period, there is no doubt that a substantial part of the increase in investment goods imports -- and hence in investment outlays -- reflects an increase in "real" capital formation, an increase which proportionately must have exceeded by a substantial margin the simultaneous growth of the national income. In other words, there has been a continuing rise in the rate of investment over this period. This combination was made possible by the expansion of domestic output and by receipts of foreign aid and loans.

B. RATE OF INVESTMENT

An expansion of investment has occurred in the private and public sector. In the latter the continuing increase in the oil revenue (and also in tax revenues) augmented substantially the financial resources of Government so that public investment as well as outlays on current administration, defence, health and education were stepped up from year to year.

TABLE 8 -- EXPENDITURE OF MAJOR GOVERNMENT AGENCIES
(Amounts in Billion Rials)

	1335	1336	1337	1338
1. Ministries*	19.8	20.8	29.0	31.2
2. Plan Organization	7.7	11.5	14.5	15.6
3. NIOC	-	-	7.0	7.6
TOTAL			50.5	54.4

Source: Budget Date

* See Statistical Appendix for breakdown of Ministry Expenditures

Moreover, as the oil revenue accrued as foreign exchange, its growth permitted a progressive liberalization of imports. In the private sector, investment demand was stimulated by rising Government disbursements. On the supply side, the easy credit policy, accentuated by loans from the revaluation of the currency backing, has given an additional stimulus to investment which seems to have been very potent.

C. FUTURE PROBLEMS

The continuing rise in the rate of investment was bound to exert some pressure on resources; this expressed itself, in the first place, in rising prices.

TABLE 9 -- GENERAL INDEX OF THE COST OF LIVING CORRECTED FOR SEASONAL FACTORS
(1334 = 100)

Year	Average for the year	Prices in the month of: Shahrivar	Prices in the month of: Esfand
1327	79	78	80
1330	73	73	75
1333	98	97	100
1334	100	99	105
1335	109	108	114
1336	113	116	113
1337	118	115	131

Source: BMI preliminary studies of revised cost of living index for the years 1337-38, corrected for seasonal factors.

N.B. For a detailed table see Statistical Appendix.

There are signs that these pressures have been increasing. In spite of two successive good crops the rise in retail food prices accelerated in the second half of 1337.

Not too much should be made of this phenomenon, which may be of a purely temporary nature, were it not for the following fact: as domestic demand has grown over the last few years, more and more of it spilled over into imports so that the demand for imports on private and public account first adjusted to, or caught up with the rise in the country's foreign exchange receipts and eventually overtook it.

TABLE 10 -- FOREIGN EXCHANGE RECEIPTS AND PAYMENTS
(Amounts in Million Dollars)

	1333	1334	1335	1336	1337
1. Exports(commercial)	108.5	82.1	89.6	98.4	86.3
2. Imports(commercial)	-138.2	-206.7	-229.6	-280.2	-370.7
3. Net non-commercial transactions and invisibles	- 5.4	- 6.9	-18.1	- 9.1	- 2.7
4. Exchange expenditure of Gov't., P.O. and NIOC, including debt services	- 2.1	-45.2	-55.2	-75.3	-162.6
5. Oil revenue, rial purchases of Consortium and foreign aid. (Loans and grants)	80.4	198.3	267.5	372.5	397.2
6. Miscellaneous	- 38.5	-16.0	-39.9	-46.3	3.3
7. Change in reserves	4.7	5.6	14.3	60.0	-49.2

Source: BMI Annual Balance Sheet

The development, made possible by a strong foreign exchange position, naturally had the effect of moderating the upward pressure on domestic prices. But as the Table 10 shows, it has also led in the most recent period to a loss of foreign exchange reserves; this rules out continuing substantial increases in imports (relative to exports) as a safeguard against inflation.

It is true that the country's international reserve position is still fairly strong.

TABLE 11--FOREIGN EXCHANGE RESERVES
(Amount in Million Dollars)

	1336	1337
Issue Department	86.8	111.2
Banking Department	189.7	117.0
TOTAL:	276.5	228.2

If one disregards the purely conventional division of the country's stock of international money into a reserve needed for currency backing on the one hand and a free reserve on the other, the amount of gold and foreign exchange held by the BMI still represents over 40 per cent of the country's total foreign payments in 1337; this precentage in fairly high by international standards, particularly in view of the comparative reliability of the Income from oil.

There is no denying, however, that the inflation problem has now appeared on the horison in the new form of an international payments problem. Under these circumstances a further increase in the rate of investment could easily push the economy into a more serious inflation, unless offsetting measures were taken designed to reduce the competing demands for higher public and private consumption.

In the domestic economy the danger of inflation shows up most clearly in fields where supplies cannot be increased quickly, as in food markets. Knowledge of the sectors where price rises alone are not sufficient to call forth additional output is useful in indicating priority fields for action by the public authorities. When economic policy is faced with the double aim of ensuring continued expansion and reasonable price stability, efforts to increase supplies are just as important as the control of aggregate demand.

The problem posed here is part of a much wider issue. The long run growth of the Iranian economy depends not only on the amount of investment; growth also depends on the efficiency of investment -- that is, on choosing the right projects and executing them well. Economy policy, so far, has been very successful in stepping up the rate of capital accumulation but, as the following chapters show, there is much room for improving efficiency in using the new capital assets and for making sure that scarce capital is put in first where it is required most. These are problems of planning to which reference is made below.

III ISSUES AND PROBLEMS OF THE SECOND PLAN AND OF THE FUTURE

The current plan is by now more or less fixed. However, there are important areas of weekness that can and should be strengthened in the immediate period ahead. The main needs are for better programming, greater coordination of investment progress both within the Government and between the public and private sectors, and a more careful consideration of investment priorities

A. IMPROVED PROGRAMMING

With the plan Organization program fully launched, there is need during the remainder of the Plan period for increased efforts to improve the operation of the Program. The various staffs of the Plan Organization -- the Budget Bureau, the Project Bureau, the Economic Bureau, the Technical Bureau, and the Financial Division -- are now organized to give the Managing Director and the Operating Divisions effective support in such programming. A program and Planning Committee, composed of these units, has been set up to advise the Managing Director on all proposed program changes during the remainder of the Plan period In the past there have been too many haphazard and ill-considered changes in the program; these resulted in poor balance in many areas and in serious financial and administrative difficulties. Programming must now be guided by the following considerations:

(1) A clear recognition that the revised 87 billion rial program reflects the maximum amount of resources likely to be available for the current plan period. A haphazard addition of projects that would take the program beyond these limits must be avoided. Consequently, if such projects are added, their cost must be offset by the reduction or elimination of other projects now in the program or additional financing must be made available

(2) If additional projects are to be added to the present revised program on the basis of the preciding paragraph, such projects should be adequately planned both in terms of their cost and their relation to other projects both in the Plan and outside of it.

(3) Annual cash disbursements through mid-1341 need to be projected to see whether funds will be available when payments must be made. To cover periods when normal funds are insufficient, advance arrangements must be made with Bank Milli for interim accommodations. Such undertakings would forestall the cash crises which have characterized Plan Organization operations in the past two years.

(4) A procedure for more systematic and continuous field supervision and evaluation of Plan Organization projects should be instituted to ensure that the Managing Director is promptly and accurately informed of cases where work is not proceeding according to plan.

B. COORDINATION

An important problem area in the drive for improved programming is that of coordination. This arises from the fact that the planning and execution of each major program within the Plan involves more than one public agency. The divided responsibility and often independent policy pursued by these agencies have led in many instances to confusion, waste and duplication. This has been true to some degree in every field -- communication, industry, social affairs and agriculture.

What is needed, if this situation is to be improved, is in the first place better programming in the various government agencies concerned with development, as well as coordination of their programs with those of Plan Organization.

Better coordination requires much better understanding than currently exists of program objectives. This comes out most clearly, perhaps, in the agriculture sector. One of the country's major agricultural objectives should be to bring about rapid improvement of income and productivity of the present cultivator. However, while there are a number of projects that seek to serve this end, such as fertilizer, seed improvement, pest control, cooperatives, and agricultural credit, none of them is formulated in such clear terms as to provide a basis for agreed action by the many agencies concerned. The result is a dispersion and fragmentation of responsibility in one of the key areas of economic development. While one can argue that there are here administrative and institutional "bottlenecks" that must be dealt with, the initial difficulty lies in the planning process itself. Once an objective has been defined and the steps necessary to reach it have been worked out, a basis exists for agreed action by government agencies concerned. Without clear objectives and careful programming each agency pushes forward independently with its own favorite projects.

C. THE SIZE OF THE INVESTMENT PROGRAM (PUBLIC AND PRIVATE)

Closely related to the problem of coordination is the need for the Government to take a comprehensive view of the size of its total investment effort and its relation to investment in the private sector. The size of the Second Plan was originally related to expected resources over several years; similar advance planning has not extended to development expenditures of the rest of the public sector. Many bongahs, ministries, and municipalities are engaged in development expenditure on an ad hoc basis, launching projects whenever finance becomes available, whether from the Treasury, from their own resources, or from borrowing (mostly on short term).

Public investment expenditure outside Plan Organization have in this way reached a substantial magnitude. The fact that such a large part of public investment has not been subject to any overall financial restraints has been a factor in the reduced allocations of oil revenues to the Plan which has resulted in serious dislocation and disruption of the development program. The lack of overall financial planning has furthermore resulted in a considerable number of projects that are not properly related to the rest of the Government's investment program.

For the preliminary planning of the Third Plan there should be undertaken a comprehensive analysis of the investment program of the entire public sector.

In determining the size of the country's development effort it is wrong to think of oil revenues and their allocation as the controlling factor. The problem should be approached from the viewpoint of economic objectives and the volume of investment needed to attain them; this may be larger or smaller than the oil revenues. The latter should be regarded as part of the Government's general resources out of which all government expenditures must be financed.

The size of public investment will also depend on the respective roles the private and public sectors are expected to play in the achievements of the next Plan's objectives. In view of the unexpected vigor of private industrial investment in the past few years and of the relative efficiency of private industry as compared with public, it is possible that the private sector may be able to carry through much of the industrial program that the Third Plan may include, given sufficient government support.

D PRIORITIES

Allocation of resources among competing sectors of a development program is the very heart of the planning process. The review of the current Plan has yielded certain general observations of this score.

The Second Plan has been weighted rather heavily with projects that do not result in an early increase in production. This presents no difficulties if the economy can afford to wait for the benefits that will eventually flow from these projects. However, the existence of inflationary tendencies suggest that the current Plan may have over-emphasized long-run projects and neglected certain quicker-yielding investments that could increase the supply of goods in the near future.

The general problem of priorities that is reflected here comes out most clearly in the present and future road programs. The current road program absorbs over 20 per cent of the total of Plan Organization's 87 billion rials. The need for more and better roads in Iran is so compelling that an economic justification could be made for a road program twice or three times the scope of the present one. But a faster expansion of road building during the Third Plan could be done at the cost of a slower expansion of public programs in the other sectors -- agriculture, industry, and social affairs.

To arrive at a decision on such a priority issue, the expected results from such an allocation must be measured against its contribution to an overall target of economic growth. A good judgment on this question can only be made within a Plan framework that contains a general growth target and an estimate of the probable contribution of each sector toward reaching this target. Such a comprehensive plan is now lacking.

While the broad allocations between sectors in the current Plan cannot be avaluated in the absence of a proper Plan frame, there is an obvious and important deficiency in the allocation to agriculture that can be identified. Of the present allocation of about 19 billion rials, the irrigation program accounts for almost two-thirds of the total. This leaves less than 5 billion rials for the carrying out of country-wide programs designed to increase the productivity of presently cultivated land -- through programs in seed improvement, pest control, fertilizer application, agricultural machines, forestry, livestock, etc.

The preparatory work done in the past five years to mount quick-yielding agricultural programs had reached a stage by 1338 that would permit a considerable acceleration of the work. The current allocation does not permit such a rapid advance to be made. An additional 5 billion rials would be necessary for this purpose. The resulting program would still be a modest one in terms of size, but it would increase production fairly quickly. There is still opportunity to shift resources within the agriculture sector to achieve this -- the three large dams are fully committed and require very large sums. The current agriculture program thus illistrates the danger of investment in large dams if the allocation to agriculture is not large enough to finance some of the quick-yielding projects that should be activated. If, however, some reallocation of resources within the overall program proves feasible, or if additional financing over and above the current 87 billion rial program becomes available, expansion of the quick-yielding part of the agricultural program should take first priority. This judgment is reinforced by the evidence of inflationary pressures in the economy noted in Part II of this section, and the shortages of food and agricultural raw materials that are an important cause of current inflationary tendencies.

In addition to the problem of allocations among sectors, there are difficult priority decisions within each sector that should be faced more explicity than has been the case in the current Plan. In fields as broad as transportation, the experience to date indicates that future priority decisions will require more study of the interrelation of the planned expansion of pipelines, railroads, ports and roads. In the case of roads alone, more consideration is needed of the desirability of having more roads of a less expensive type as against fewer first-class roads.

Within the agriculture sector, there is a basic unanswered question as to the relative emphasis to be given to irrigation programs that would expand the cultivable area of the country, and other programs that would increase the productivity of the existing areas under cultivation. Within the irrigation program itself there is need for detailed analysis of the comparative advantages of wells, ghanats, small dams and high dams for different regions of the country before the country can be sure of making the best use of its resources.

In industry, consideration must now be given to the relative emphasis on large-scale and small-scale industry, export or import-replacing industries, capital or labor intensive industries, and to the desirable pattern of industrial location.

Finally, in the social affairs sector, more careful consideration should be given in the Third Plan to the rural area, hardly touched in the present Plan, which has tended to pay more attention to the demands of towns and cities. Another basic priority question within this sector is the proper division of resources between increasing the flow of skills in the immediate future, and basic educational, health and welfare programs.

IV. CONCLUSION

A. Rapidly rising ordinary gorvernment expenditure, as well as expenditures on defence and on government investment outside the Seven Year Plan have forced the Government to reduce substantially the original share of the oil revenue allocated to the Plan Organization. These diversions of oil revenues from Plan Organization to other government purposes reflect a lack of advance planning of the Government's total financial needs. The disruptions and dislocations in the development program caused by the arrival of financial needs that have not been well anticipated will continue until the Government is able to develop a reasonable accurate estimate of its total financial situation for 3-5 years into the future. The work on the preparation of a Financial Plan, begun by the Ministry of Finance earlier this year, is therefore most welcome.

B. Production and investment trends indicate that Iran is at the beginning of a phase of rapid economic development. The continuous and apparently substantial increases in the rate of total investment accompanied by increases in public and private consumption has made the appearance of inflationary pressures in the economy almost inevitable. The level of total investment reached suggests that for the immediate period ahead the main problem will no longer be that of achieving a high level of investment, but assuring that such expenditures are wisely selected, carefully planned, and efficiently executed. Part of the present inflationary pressures appears to arise from specific shortages in supply rather than the level of aggregate spending. In so far as this is true, it argues for giving particular attention in the case of development expenditures to those areas of production in which such shortages threaten to become serious, notably agriculture.

C. While the paramount concern in the initial phase of the Plan Organization's operations was to get a program launched as soon as possible, the situation now calls for increased attention to the general problem of improved programming. Such programming would result in confining the program to probable resources, more realistic costing of projects at the start, and a more effective coordination of projects and programs with other government ministries and agencies.

D. The Government should begin working immediately on a preliminary Plan framework for the Third Plan. Such a Plan should take as its point of departure, not the partial approach of the current Seven Year Plan, but the economy as a whole. It should therefore plan development expenditure for the entire public sector, and formulate production targets and resource requirements for the private sector.

PART TWO

AGRICULTURE AND IRRIGATION

(Chapter I of Plan Program)

PART TWO

AGRICULTURE AND IRRIGATION

(Chapter I of Plan Program)

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I. LAND RESOURCES, PRESENT UTILIZATION AND INCOME

Agricultural output in any nation is a function of the physical characteristics of the land area, its extent, the climate, the technology of exploitation and the cost-price relationship of products therefrom. While the physical area and climate can be taken as fixed, the producing area and the level of output are influenced by changes in technology and price-cost relationships. Therefore, the amount of productive land and its productivity are both variable. In Iran for example, water developmentprojects, mechanization, and the application of science to agricultural production are increasing the country's agricultural capacity.

From the point of view of its physical characteristics and its climate, about a third of Iran's land area of 164 million hectares are considered unable for agricultural production. This would include forests, field crops, orchards, and pastures. At the present time, however, due to the low level of technology of exploitation and a shortage of water, the cropland area is only 11 per cent of the total and less than 4 per cent produces a crop each year. Yields are low. About 2.5 million hectares are 15 per cent of the cropland are irrigated; however, these lands produce more than one-half of crops harvested.

Since there are no adequate national land-use surveys, it is particularly difficult to assess the extent of grazing areas. These have been estimated as high as 42 million hectares, but much of this has very sparse vegetation.

In Table 1 the estimate of 18 million hectares or cropland is widely accepted. However, the 31.5 million hectares of potentially cultivable land is a very tentative estimate, nor has this area ever been assessed as to the cost of bringing it into production. One reason for this is that it will be a long time before the 18 million hectares now cultivated will be brought to a satisfactory level of production. Top priority should go to development of presently cultivated lands.

There are several possibilities for expending agricultural land resources. The most spectacular of these and probably the least economical is through the construction of large dams. This method could bring forth an increase of 10 per cent in the irrigated area of the country. A less costly and more manageable method is through deep and shallow wells and the construction of new ghanats (underground channels). This has an unknown potential due to lack of data on underground water resources, but there are good reasons for supposing that pump irrigation will show spectacular gains in the next decade. The main opportunity for expansion, however, lies with improving technology on the cultivated lands and pastures now in existence. This method could in effect add another 18 million hectares by doubling output existing cultivated lands while at the same time raising the carrying capacity of range lands for livestock.

TABLE 1 -- LAND UTILIZATION IN IRAN[a] -- 1336

	Area in Hectares	Percent of Total
Land in Farms		
Cropland: Under crops	5,070,000	3.10
Fruits and Nuts	930,000	0.57
Fallow	12,000,000	7.33
TOTAL CROPLAND	18,000,000	11.00
Pasture in Farms	160,000	0.10
Farm Woodlands	1,100,000	0.67
Villages, village roads, wasteland and other land in farms	1,240,000	0.76
TOTAL LAND IN FARMS	20,500,000	12.53
Land not in Farms		
Forests and Ranges:		
Forests[b]	18,000,000	11.00
Grazing land outside forests	10,000,000	6.11
TOTAL FORESTS AND RANGES	28,000,000	17.11
Cities, roads and rail roads	2,000,000	1.22
Wasteland:		
Potential cultivable	31,500,000	19.26
Desert and other wasteland	81,600,000	49.88
TOTAL WASTELAND	113,100,000	69.14
TOTAL LAND NOT IN FARMS	143,100,000	87.47
GRAND TOTAL LAND AREA	163,600,000	100.00

[a] Hadary, Gideon and Karim Sai -- Agricultural Statistics of Iran. American Embassy, Tehran, Iran, 1949, p.9. (This table, originally prepared in 1949, was brought up to date by Jalil Mahmoudi. Revision is based upon data obtained from the Agricultural Economics Division, Ministry of Agriculture of Iran, Agricultural Attaché U.S. Embassy, and the Office of Economic Affairs, U.S. Operations Mission in Iran, Tehran, Iran).

[b] Undetermined portion of the forest land is grazed by livestock.

Table 2 provides the most authoritative estimates of land occupied by each of the crops grown in Iran in 1957. Wheat and barley account for two-thirds of the area partly because wheat grown by peasants is their main source of food supply. It is largely consumed where grown. Barley is used primarily as a feed for livestock. The area sown to these two crops has been increasing with the introduction of tractors during the past decade. Tractor cultivation (with about 5,000 tractors in use) covers an area of about one million hectares. Thus a large part of the increase in production of wheat and barley during the past 10 years can be accounted for by new lands brought into cultivation. The remainder of the increase was due primarily to favorable weather conditions.

The areas seeded to rice and cotton have remained relatively fixed. Rice production has increased very little but cotton production is making substantial gains (due primarily to improved seed) in spite of substantial declines in prices. There is evidence also of increases in fruits, nuts, and vegetable production; but data are highly unreliable for these crops.

Iran's current agricultural production is valued at approximately one billion dollars per year; about two-thirds of this is derived from field crops and orchards; one-third from livestock and livestock products. Wheat is by far the most important crop, accounting for more than one-third of the income from all crops; it exceeds the combined income from all fruits, nuts, and vegetables. Cotton, on the other hand, is only one-sixth as important as wheat in terms of value produced (Table 3).

The one-third of agricultural production contributed by livestock and livestock products comes primarily from milk (about 57 per cent) and meat (22 per cent).

Production of all principal commodities has been increasing during the past five years. During this period it appears, on the basis of U.S. Embassy estimates, that per capita consumption of wheat, rice, livestock and dairy products has increased between 2 and 4 per cent per year. While one cannot place much confidence in these estimates, they do reflect a consensus of opinion that, in food production, Iran has been moving forward. Novertheless much remains to be done in bringing per capita food consumption up to acceptable standards, particularly for the large low-income sector. As incomes increase in the next few years we can expect an increasing pressure for more production of food, particularly for livestock and livestock products.

So far as the prospects for increased livestock production are concerned, there is evidence that pastures are deteriorating due to over-grazing and general mismanagement. If so, Iran will be faced with rising prices due to limited supplies of these products without prospects for effective measures to correct the situation. Pasture stabilization and improvement requires time under the best of circumstances and, in Iran, it will require special efforts to meet the situation.

1957/58

TABLE 2 -- LAND USE BY TYPE OF CROP - 1336 [a]

Crop	Total (Hectares)	Percent of Total
Wheat	3,100,000	51.66
Fruits and Nuts	930,000	15.50
Rice	270,000	4.50
Barley	910,000	15.17
Cotton	310,000	5.17
Vegetables and Melons	230,000	3.83
Pulses	130,000	2.17
Sugar Beet	43,000	0.72
Other grains	43,000	0.72
Tobacco	15,000	0.25
Other crops [b]	19,000	0.31
TOTAL	6,000,000	100.00

a/ Data obtained from the Agricultural Economics Division, Ministry of Agriculture of Iran, and unpublished reports of the Agricultural Attaché, U.S. Embassy, Tehran, Iran.

b/ Including vegetable oil seeds, gums, jute, tea, alfalfa, and other forage crops, henna and dyes.

TABLE 3--PERCENTAGE DISTRIBUTION OF SALES OF AGRICULTURAL PRODUCTION

IRAN -- 1336

	Per cent
Wheat	24
Rice	8
Barley	4
Cotton	4
Pulses	1
Others	4
TOTAL FIELD CROPS	45
Fresh Fruit	10
Dried Fruit	3
Nuts	3
Vegetables and Melons	3
TOTAL ORCHARDS, GARDENS	19
Milk	21
Meat	8
Wool and Hair	2
Eggs	2
Poultry	1
Others	2
TOTAL LIVESTOCK	36
TOTAL CROPS, ORCHARDS, GARDENS, LIVESTOCK.	100

Source: U.S. Embassy, Tehran.

II THE AVAILABLE FUNDS

The original allocation of funds in the Second Seven Year Plan Law gave Chapter I (Agriculture and Irrigation) about 26 per cent of the total Plan funds Within this amount each sub-chapter was allocated a definite sum .

Subsequently, four changes have occured: (1) the total projected funds available to Plan Organization have been reduced; (2) the share going to Chapter I has been reduced; (3) funds for agricultural development have been shifted from Chapter I to the Khuzistant project and to the new Regional Development Chapter, and (4) allocations to sub-chapters have undergone major revision

Non-agricultural items have been included in Chapter I, while some agricultural items appear in other chapters of the Plan For example, one should deduct from the agriculture program the hydroelectric and potable water-supply aspects of the Karaj and Sefid Rud dams. If this were done the agricultural allocation would be reduced by nearly 7 billion rials or 40 per cent. On the other hand, agricultural expenditures in the Khuzistan should be added in the amount of about 3 6 billion rials for such items as dam construction and canals of the Karkheh Project, for the sugar cane plantation of the Dez river, and for general agricultural work such as the fertilizer research being done in the region. In addition, agricultural aspects of other regional development projects will absorb about 300 million rials by the end of the Plan period.

Making the above adjustments the real allotment to agriculture for the total seven year period amounts to about 14 billion rials; this is 16 per cent of the 87 billion rial program

Public funds for investment in agriculture beyond those provided by Plan Organization are concentrated in the Agricultural Bank of Iran. No estimates are available of total loans made by this bank for the period under consideration, but loans outstanding as of March 21, 1958 were 1.6 billion rials. An additional 3 5 billion rials has been assigned to this bank for loan purposes so that total loans for the current Plan period could exceed 5 billion rials

Agricultural loans made by Bank Omran have been on a much smaller scale (54 million rials were out on loan in June, 1959) but land repayments are being made available to the farmers in the form of laons for working capital and subsistance

(See Statistical Appendix for the original legal appropriation, expenditures for the period 1336-1337, and the revised program for the Seven Year Plan period)

III THE CURRENT PROGRAM

Agricultural development in Plan follows two basic lines of approach. On the one hand, new arable lands are created by certain irrigation projects and the breaking out of new lands. This may be referred to us a capital intensive approach. On the other hand, a much larger potential exists for creating additional productive capacity through more effective use of farmland new in cultivation, including a shift from animal power to the machine.

When Iran embarked on its agricultural development program through the Plan Organization, both approaches came under consideration. The Second Seven Year Plan Law made the distinction between these two approaches, and called the activities of the Chapter "Agriculture and Irrigation". For "Agriculture", funds were allocated to projects such as seed improvement and livestock development with a view to increasing the intensity of land use. For "Irrigation", large sums of money were earmarked for studies of irrigation possibilities and for the construction of irrigation works.

The activities of Chapter I are therefore divided into two broad programs: the agricultural program and the irrigation program.

A. THE AGRICULTURAL PROGRAM

It is impossible to quantify precisely the effects of the general agricultural projects; but there is no doubt that results to date have been small. This has been due partly to the meager resources applied to these projects. But it is due also to the fact that it takes time to "tool up" for a technological revolution in agriculture. Scientists and extension workers must be trained and research work requires time to bear fruit.

A brief description of the planning function as it should apply to agriculture in Iran brings this into focus. While it is a broad concept and includes investment, its primary characteristic is that it calls for the total planning of individual villages.

Iran's agriculture is a tradition-bound village agriculture, generally devoid a most of the essentials of a modern economy. Almost every village in Iran needs credit, clean seed, guidance in the selection of seed and livestock; it needs farm machinery, marketing facilities, cooperatives, sanitary water supplies and education, both fundamental and vocational. Each village needs all of these things more or less simultaneously if progress is to be reasonably rapid, in any given village. Planning therefore call for an integration of these functions and investments on a village basis. To provide credit without technical guidance and a reasonably adequate educational program may mean the credit will be largely wasted. To provide the means for increasing production without at the same time strengthening the the peasants' bargaining power in their dealings with the landlord and the marketing agents may leave them in financial distress.

The investment emphasis within the Plan Organization has done little to meet the problem of village planning. Irrigation works are good in themselves but, as in the Khuzistan proposals, they contribute little in the short run to changing the life of the peasant in the absence of a much broader planning program. The problem we face therefore is a re-examination of the basic investment orientation in the allocation of funds in the agricultural sector of Plan Organization, with a view to finding ways of stimulating integrated village development.

Even if the village planning thesis were generally accepted, there remains the problem of integrating the work of public agencies in bringing this about. Here we are referring primarily to coordinating the activities of Plan Organization with those of the ministries, institutes, and agricultural banking facilities.

To a degree, Plan Organization has cooperated with the Ministry of Agriculture (and other ministries and agencies) in the financing of projects. In several instances Plan Organization either supplements the appropriations available to the ministry budget or makes funds available to a ministry to execute a project. There is as yet, however, no comprehensive cooperation and planning of such projects which would provide for the longer-term integration and maintenance of projects. The present procedures assume that Plan Organization provides the capital budget, and the Ministry of Agriculture the budget for operation and maintenance. This assumption, however, is not carried out in practice, since there is not an integrate approach based upon common objectives or time horizons.

The result of these conditions has been a spotty and uncoordinated approach to agricultural development. Yet to some extent the foundations are being laid. Plan and animal disease control projects for example have been national in scope and are yielding results. Research on improved varieties of field crops has reached a stage where a significant impact on yields can be expected. The training of village level workers and extension staff is gaining momentum, and valuable experience has been gained from the limited activities in this field. The results of the agricultural machinery projects have been immediate and substantial.

Notwithstanding these gains, progress in Iranian agriculture has been such as to leave little impact on the rural economy as a whole. If we are to change to snail's pace of the past, there must be a substatial increase in basic agricultural programs. However, to make these effective, there is a need not only for a major national commitment to provide the trained manpower required for these programs, but also for an enormously expanded program of supervised rural credit through cooperatives.

B. THE IRRIGATION PROGRAM

The irrigation program of Plan Organization has four parts: (1) Irrigation and Dam Construction; (2) Irrigation Surveys; (3) Ghanat Loan and Deep Wells Program; and (4) Irrigation Societies..

Table 4 shows the distribution of expenditures for the above programs up to the end of 1337 and projected to the end of the Second Seven Year Plan period. It is interesting to note that the dam construction program accounts for nearly 90 per cent of Plan Organization allocation to irrigation for the Plan period.

TABLE 4--IRRIGATION EXPENDITURES FOR HALF AND TOTAL PLAN PERIOD
(Amounts in Million Rials)

	Half Period 1334-37		Total Period 1334-41	
	Exp.	Per Cent	Exp.	Per Cent
Dam Construction	4,557	83	12,237	89
Irrigation Survey	443	8	970	7
Ghanat and Deep Well Loan	352	6	352	3
Irrigation Societies	130	3	150	1
TOTAL:	5,482	100	13,709	100

Three-fourths of all expenditures for irrigation have gone for the construction of two big dams -- Karaj and Sefid Rud. These are expected to use about 84 per cent of the Plan Organization allocation to "Irrigation" by the end of the Plan. This leaves only 16 per cent of irrigation funds for all other irrigation and dam construction, surveys, irrigation societies, and ghanat and deep well loans. The Karaj dam, which will use about 38 per cent of the irrigation allotment, is not an irrigation project; it provides water and electricity for Tehran. The Sefid Rud dam power in a multipurpose project whose main purpose is irrigation.

Expenditures on the Karaj dam can be readily defended on grounds of Tehran's needs for electricity and an adequate supply of safe wate. However, for irrigation purposes large multipurpose projects should not be given a high priority; such projects should be undertaken at a much later stage of the country's growth. This was first pointed out in the report submitted by overseas Consultants, Incorporated, in 1949. Their argument was mainly based on the following:

1. Large multipurpose projects are associated with economies of scale and are economical only when they are large. Such projects require a close market for large blocks of power and, until some degree of industrial development is achieved, Tehran is the only place that has a demand for large blocks of power.

2. Multipurposes projects in Iran have a built-in timing conflict between the water flow required for power and the flow needed for irrigation. The peak demand for irrigation is during the nine months of March to November. The peak demand for electric power is in the winter. The problem could be solved by inter-connecting those schemes that operate primarily for power with those primarily for irrigation. But the large distance between the principal cities of Iran make this possibility uneconomical.

Sefid Rud Dam illistrates tha above points. The closest market for its power is the Guilan area that can only use 20,000 k.w. of the 90,000 k.w. capacity plant. Although not accepted, a proposal was made that a transmission line, costing about 500 million rials, deliver the electricity to Tehran, 240 kilometers away. Although this proposal was rejected mainly for other reasons, conflicts of the peak demand for irrigation water and electricity would have appeared as soon as the irrigation scheme came into full operation.

The advisability of large multipurpose projects in Iran is questionable not only because of the above points, but also because an examination of the existing hydroelectric projects reveals two other significant weaknesses:

1. None of the projects made adequate provision for the management and sale of water, a water authority, water rights, maintenance costs of the canal network, land use and tenure problems. These problems still exist for both the Sefid Rud and Dez Dam projects. There are some who believe that progress cannot wait for the completion of all details of requisite planning, and that problems will be solved when they arise. There is a certain validity to this argument; but our experience with the irrigation dams in Golpayegan, Kuhrang, Kabak and Zahak are examples which indicate that this approach has not been satisfactory.

   The water of Golpayegan reservoir dam, a 160 million rial project, is sold at 0.1 rials per cubic meter. The revenue at this rate is not enough for the operation and maintenance coasts of the dam. Lack of adequate water laws prevents the possibility of setting and collecting higher water charges. The Kuhrang diversion tunnel in Esfahan is also facing the problem of collecting water charges on the one hand and of meeting increasing operating and maintenance costs on the other. The water of Kahak and Zahak dams in Sistan is being utilized without any charge.

2. The capacity and estimated cost of large irrigation projects have increased manifold. Karaj Dam cost estimates increased from 1.5 to over 6 billion rials, and the Moghan canal, which was planned to be a one-kilometer canal, increased to 100 kilometers not including the network. These increases have created two major problems in the Plan: (a) they have forced the basic agricultural programs to be cut down substantially to help make room for the large multipurpose projects; and (b) they have increased the total cost of the Plan.

The large reclamation type of project is spectacular, but not necessarily the most profitable irrigation project. The opportunity for making irrigation water available by other means and increasing production on units already in operation seems to be more advantageous than the reclamation programs.

The recent development of pumping in Fars is an exvellent illustration of these potentialities. There the number of pumps has reached about 1300 over the last decade. A four-inch pump costing about 160,000 rials gives a net return of about 57,000 rials a year. The deep well program of the Plan Organization has not received adequate financial assistance nor enough attention. The problems of service, lack of technicians and spare parts have discouraged the farmer for using deep wells. A nationwide program on wells, of the same magnitude as the agricultural machinery program, should receive serious consideration.

IV. CONCLUSIONS

There are four major weaknesses in the agricultural program of Plan Organization, and therefore of the nation. Each of these must now be corredted if agricultural development is to occur at a more satisfactory rate.

First is the assumption that most of the agricultural budget should be devoted to irrigation structures.

Second is that the Plan Organization should concern itself almost entirely with investment without worrying about the new operating and maintenance costs that will be required.

Third is the failure to insist on a programming perspective (and organization) in the ministries and related agencies.

Finally, and in some respects the most damaging to agricultural development, is the attitude that institutional arrangements (such as land tenure) are not of great importance to the outcome of Plan Organization's investment program.

Each of these points will be briefly discussed.

A. EMPHASIS ON IRRIGATION STRUCTURES

With the exception of the Caspian region, Iran is a land of low and ineffective precipitation. It is land, therefore, that has a tradition in irrigation. Quite naturally, the architects of the Second Seven Year Plan turned to new irrigation schemes as the key to new agricultural development. As a result, a very high proportion of the expenditures within the agricultural sector through the end of 1337 have been for the construction of dams, surveys for further irrigation, and loans for the construction and repair of ghanats.

Without condemning the approach, one may nevertheless raise the issue of relative returns from alternative approaches. In a neighboring country such as Egypt, where huge sums are being allocated to the construction of the Aswan Dam, it should be remebered that the technology of exploitation and the labor intensity per hectare on existing lands is at a very high level. Egypt has in fact no reasonable alternative if agricultural production of food crops is to be raised significantly. Iran on the other hand, with its low man-land ration and low level of technology in the exploitation of its existing land and water resources, has the clear alternative of increasing production without undertaking the construction of large dams.

Based on experience to date, the capital investment in one large irrigation project has been estimated to be in the neighborhood of 800 dollars per hectare of irrigated land. In some cases it may be sustantially higher. While one does not expect such investments to be competitive with other activities in the economy, the preempting of large and indivisible blocks of capital for such projects inevitably limits sources available for other activities. Some of these restricted activities are in fact of a predevelopment nature basic to successful execution of the large projects. The main conflict, however, emerges from restrictions placed on country-wide programs (such as seed improvement) that offer more immediate returns.

Agricultural and irrigation practices in Iran are notoriously inefficient, resulting in relatively low marginal returns to current investment in irrigation. Improved tillage practices, weed control, new seed varieties and improved marketing procedures all promise high returns on ivestment. These are, in fact, the prerequisities to an effective irrigation economy; these are the elements that have had far too little attention. It is doubtful, for example, whether any other country in the world squanders so much of its natural and human resources on the production of one ton of wheat per irrigated hectare of land. It is significant also that, despite a long tradition in irrigated agriculture, there is no assurance that once an irrigation scheme has been completed water users will pay an equitable fee for the water received. More serious, however, is the fact that large capital investments are made in structures without the basic technological improvements in production that are a prerequisite of successful project operation.

B INVESTMENT WITHOUT OPERATION AND MAINTENANCE

Characteristic of less-developed countries is the inefficiency and mismanagement often found in public administration. With this in mind, Iran took special steps to assure that her most valuable natural resource, oil, would be used to build up the country's economic and social structure and would not be wasted. The arrangement for doing this was to set aside large portions of the oil revenues for expenditure by a special agency charged with carrying out a development plan. These funds would thus be protected against being used in the often wasteful expenditures of the Government's ordinary budget.

The result of separating out the investment function has undoubtedly helped the investment process itself; but it has led to a dangerous neglect of the future financial requirements for making good use of the new facilities. It is true of course that the development program has gone forward in an atmosphere where careful program planning and budgeting are not yet part of government tradition. It is therefore not surprising that there has been little or no coordination between investment decisions and the effect these would have on the annual budget of the ministries or other agencies that would be responsible for projects upon completion.

Economic development requires that governments expand many traditional functions and add many new ones. These become permanent additions to the level of government activity. Development thus requires a rapid and sizeable expension of the government's current outlays for operation and maintenance entirely apart from the expansion of investment outlays. If provision is not made for this expansion, development projects will come to nothing since the money will not be available to make proper use of them. The general division of responsibility between a development agency and ministries is of course for the former to provide the capital costs of development schemes and for the ministries to take responsibility for their operation. The lack of experience with forward planning and budgeting in Iran has not only meant that this division of responsibility has not been well understood; it has also meant that no one — in Plan Organization or in the ministries -- has given much thought to the budgetary effects of investment activities.

The agriculture and irrigation programs have suffered greatly from this lack of coordination between investment and operating requirements. We see appropriations for animal husbandry stations that are not given the necessary operating budget for personnel and investigations. We see irrigation systems constructed with no provision for operating and maintenance expenses. Perhaps most wasteful of all is the present system of sending students abroad for scientific training and then failing to provide adequate salary and other employment conditions upon their return. Salary scales are so tragically inadequate at the present time that highly trained men who do not return to appropriate positions are unlikely to remain at their work for any satisfactory length of time. So far as agriculture is concerned, the minimum basic research and educational work for reasonable development cannot be done under existing budgetary and employment conditions.

C. PROGRAMMING PERSPECTIVE

The separation of the investment function from operation and maintenance (organizationally) has contributed to the continuing lack of program planning in the ministries. The Ministry of Agriculture does not have a program in any full sense of the word and coordination between projects within the Ministry is almost, if not completely, lacking.

However, it is necessary and it would be fruitful for the Ministry to formulate coherent programs within two or three probable resource levels. Until this is done, it is impossible to assess accurately the budget needs for representation to Plan Organization for development assistance. As matters now stand, Ministry projects are presented to Plan Organization piecemeal, sometimes with no clear conception of the possibility of execution. This, for example, makes it difficult within Plan Organization to come to sound judgments on budget requests for identical pieces of equipment for individual projects with no attempt to reduce expenditures through coordination of use of the equipment. This lack of planning is wasteful and unnecessary even within existing arrangements between Plan Organization and the ministries.

An example of lack of ministry planning occurred late in 1337 when the Ministry of Interior requested funds for community development. Here there was insufficient evaluation of work already done, no clear idea as to how the known deficiencies would be rectified, and no privision for permanently staffing the program. This is particularly revealing of the obvious lack of coordination between ministries, one of which (Agriculture) must come to an early decision regarding the utility of the community development approach to meeting its own avowed objective of raising the productivity of the farm population.

D. INSTITUTIONAL CHANGES

Agricultural progress depends on institutional as much as on technological changes. The most important instituional factors presently holding back Iranian agriculture are the traditional arrangements for land tenure, marketing and credit. In the past, Plan Organization has neglected isntitutional factors almost completely. Although this attitude partly reflects the non-political role of Plan Organization, it also reflects a mistaken belief that intitutional changes will take care of themselves and that Plan Organization's energies can be devoted almost exclusively to the technological dimension of problems.

This attitude has resulted in a failure to assess the relative effectiveness of projects carried out within different institutional arrangements. Work in distributed villages, for example, has had the same relative emphasis as work done in traditional landlord-operated villages. While there is a certain fairness to this, it completely misses the point that not only are the needs probably different, but also the results may be far more satisfactory in one situation than in another. It is conceivable also that in the landlord areas there is a high degree of resistance to change and, where improvements are made, they accrue almost completely to those who need additional income the least. Thus, not only would the costs of innovations be high, but also the income effect would be such as to preclude any marked change in the distribution of income. Such a redistribution of income is needed to develop the mass purchasing power upon which a successful program of industrialization must be based.

PART THREE

TRANSPORTATION AND COMMUNICATION

(Chapter II of Plan Program)

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I. OBJECTIVES OF THE CURRENT PROGRAM FOR TRANSPORTATION AND COMMUNICATION

An adequate system of transport and communication is essential to sustain economic activity of a nation, as well as to provide a means for stimulating the further development of its industry, trade and commerce.

In 1334, when providing thatapproximately one-third of the 70 billion rials appropriated for the Second Seven Year Plan was to be allocated to the development of Iran's transportation and communication systems, recognition was given to the fact that the existing facilities and services were inadequate.

The transportation and communication system of Iran in 1334 was impeding the current trade, economic growth and social integration of Iran. Fertile areas, with production surplus to local needs, had insufficient means to transport produce to major consuming centers where supplies were short. The major highway system had not kept pace with the demands made by the increasing number, speed, and size of vehicles. The rail and road routes to Europe were inadequate of closed, putting a heavy requirement on ocean transport through the Persian Gulf for trade with foreign countries. Port facilities were in need of repair and development. Port administration was divided and inefficient. To provide Iran with an airport which could accommodate international air carriers, improvement and extension of facilities at Tehran were essential to keep abreast of the technological advances in international air transport and to qualify Iran as a port of call. Communication facilities, i.e., domestic and international post, telephone and telegraph, were either totally inadequate or non-existent, and were impeding the trade and commerce as well as the social integration of the country. In short, obvious and severe bottlenecks in Iran's transportation and communication system were limiting the level of trade and commerce, causing distortions in marketing and prices, increasing costs and the price level, and restricting economic opportunities and growth.

To maintain, repair and develop the existing facilities 22.8 billion rials were appropriated for Transportation and Communication (Chapter II of the Law), and allocated in the following amounts:

TABLE 1--CHAPTER II ALLOCATIONS
(Amounts in Million Rials)

	Rials	Percentage	
		Of total original Appropriation (Rls. 70 Billion)	Of Appropriation For Transportation and Communication
Total	**22.821**	**32.6**	**100.0**
Roads	10.599	15.1	46.4
Railroads	6,244	8.9	27.4
Ports	2,487	3.6.	10.9
Airports	1,387	2.0	6.1
Telecommunications	1,596	2.3	7.0
Cartography	508	0.7	2.2

The transport and communication program embodied in the Plan Law primarily grew out of the uncompleted program of the First Seven Year Plan, the needs and requests of the ministries, and the analysis and specific recommendations of the Overseas Consultants, Inc. report. Without an analysis of the country's transport requirements and the alternative wats of meeting them, it is difficult to define the objective of the program for the Chapter as a whole. The apparent objectives as revealed by the distribution of funds were essentially to meet the emergency needs of a transport and communication infra-structure which was woefully inadequate in the light of current and foreseeable demands. Thus the program was designed primarily to repair and develop existing facilities to meet current demands; provision was also made for the development of some new facilities, such as railroad extension to Tabriz and Mashad and the port for Bander Abbas.

The influence of uncomplete programs and projects of the First Plan was most significant in shaping the Second. Similarly, we must now recognize that the next Plan is being committed through incomplete and deferred projects, supplementary and complementary projects which, on completion of the present program, will have a high priority. One-quarter of the funds allocated to transportation and communication were already claimed by "Programs Under Implementation" at the start of the Second Plan.[1]

The transportation and communication programs were development without much consideration of alternative means for most effectively meeting the country's total transport and communication requirements. There was some consideration of road and rail projects in relationship to the development of the ports and international trade, but no attempt was first made to determine the total transport needs of the nation and then design a rational and integrated program to meet current and future needs. While this was a planning defect it was not too serious in 1334, since the emergency needs in most sub-sectors were real and obvious, and marginal choices between alternative transport investments were not as significant as they are now. It is obvious that in the development of the next Plan careful attention should be given to priorities among each of the transportation and communication subsectors; these in turn must be more closely related to the development objectives of the economy as a whole so that investment decisions in this sector will reflect the desired rate of development and the type and area of increased traffic that must be served.

Within the sector planning must be total planning because of the close inter-relationship among various means of transport; for example, oil pipeline construction (which has not been explicitly considered in designing the current Plan Organization transport programs) affects not only the demand for railroad facilities and tank cars, but also the use of highways and the relative demands on the ports on the Shatt-el-Arab and the ports of Bandar Shahpour and Bandar Mashur. These facilities cannot be adequately planned without relating the transport network to the requirements of trade, both in composition and volume.

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[1] Rials 5.6 billion, of the original appropriation of Rls.22.8 billion was allocated in the appropriation for "Programs under Implementation".

II APPROPRIATION AND EXPENDITURE OF FUNDS

Of the approximately one-third of the total Plan Organization appropriation in 1334, allocated to transportation and communication, almost one-half (Rls.10.6 billion) was allocated to roads. Railroads were allocated about one-quarter of the Chapter's funds, ports ten per cent, airports and telecommunication six and seven per cent respectively, and cartography two per cent of the Chapter total (see Table 1.) The specific objectives of these sub-chapter programs are discussed below individually, but the allocation of funds, between the transport and communication media, indicates the relative emphasis of the Chapter program. However, during the execution of the program there have been significant changes in the composition of the program.

Those programs, particularly railroads, which were well defined, already engineered, and more easily administered through large individual contracts, got under way quickly. By 1338 their funds have been nearly expended and the work completed On the other hand, programs which have required years of engineering and planning (particularly roads), with many small contracts and administrative difficulties, have shown increases in their costs and delays in execution. Cost increases in road construction, without a decrease in the program's scope, has increased the share of roads from less than 50 per cent to about 60 per cent of the Chapter's program. These increases required the cutting back of other sub-sectors of the Chapter (particularly rail and telecommunications) and a reallocation of funds from other Chapters. Whereas in the First Plan 27 per cent of the funds were allocated to Transportation and Communication and in the Second Plan 32.6 per cent was originally allocated, the revised program now provides 37.3 per cent of the total funds for this area of development.

While only about 40 per cent of the current allocation of funds to the Chapter has been spent at the half-way mark of the Plan, the Chapter program has become extremely inflexible for the remainder of the current Plan period. The remaining funds are firmly committed in contracts for projects which are well launched and partially completed. The degree of inflexibility was increased in the recent reprogramming which required cutting the transportation and communication program from a level of 32.9 billion rials to 30.4 billion rials. Some projects not under contract were deferred to assure having funds for the more essential projects. The remaining projects therefore are not only firmly committed, but the largest part of them is also being financed through loans from the International Bank for Reconstruction and Development as well as the Development Loan Fund; these projects could be revised only through the reopening of international loan negotiations.

With the current program substantially set and inflexible, our main attention should turn toward developing the next Plan program. However, while not minimizing the planning which must now be done for the longer-range objectives, it is concurrently most essential continually to develop the analysis and program planning process in the transportation and communications sector within the current period since (a) it will assure more effective use of the current funds by Plan Organization; (b) it will help establish the planning processes with the ministries out of which the next Plan must necessarily be developed; and (c) it will help assure us that the development program of the Plan Organization is coordinated with the operational, training and maintenance budgets of the ministries. The current programming process within Plan Organization and with the ministries and bongahs concerned with transportation and communication (i.e. Roads, Rails, DGCA, Ports, Customs and Monopolies, and Interior) has been so deficient as to be almost non-existant. This is causing inefficient and illogical use of funds and is endangering the execution of program through unforeseen shortages of funds and the inability of ministries to use and maintain the facilities properly once developed. This deficiency must be rectified immediately.

III CRITERIA FOR PROGRAM ANALYSIS

Iran's transportation and communication system does not exist as an end in itself; it exists primarily to meet the requirements of agriculture, industry, trade, as well as social and military objectives. Therefore, the individual program analysis have been made primarily to determine whether the projects and programs are designed to meet the current and prospective demands effectively and efficiently. For adequate analysis a relatively clear indication is needed as to current and future levels of demand for transport and communication services. We must also have reasonable estimates of the level of production, the volume, composition, of trade and commerce and the country's social and military objectives.

With proper maintenance, the life of roads, railroads, airports and telecommunication facilities varies from 10 to 30 years. Thus real insight into the basic development pattern of the country is required to analyze and properly plan its infra-structure. Long-range trade projections are needed, both domestic and international, with indications of types of commodities. Long-range programs of area development must be made -- involving both political and economic factors. For example, the relative emphasis given to the Kerman and Baluchistan regions will significantly effect and will be effected by the port, rail and road programs. Studies of resources, population location and trends, arable land and water resources, need to be undertaken to indicate the basic limitations or indications of the communications system which is required. In Iran, the immediate and long-range national requirements for transportation and communication need to be defined far more clearly than they currently are.

While the transportation and communication facilities are primarily required to satisfy the demands which the economy and social structure make upon them, they also stimulate development by unleashing latent and potential demands and resources. Improved roads can bring forth more traffic improved ports generate greater trade, improved telecommunication facilities can tap a latent demand for commercial and social intercourse. Investment in transport and communication facilities can and should be used to stimulate economic development as well as to support it.

The basic criterion being used to judge the program is its ability to sitisfy current and prospective demand. However, various related questions must be asked and answered; among them are the following:

1. Are existing facilities being utilized effectively? Are more facilities called for, or can the same transport requirements be met by better use and better maintenance of existing facilities?

2. Do the public sector investments in transport and communication (Plan Organization, ministries and municipalities) fit together, and are they meeting and ecouraging the more economic methods of transport, both private and public? Most of the transport and communication facilities are government owned and operated, but domestic and international air carriers, truckers, local telephone systems, ocean-going freighters, domestic warehousing, etc. are privately owned, and investments in these facilities affect the use of and demand for the government installations.

3. Does the Plan Organization program fit with the program and budget of the ministries concerned, in terms of capital improvements, maintenance expenditure, personnel training, and operating costs?

4. To what degree are facilities self-supporting? While transport and communication facilities are to a large degree social overheads, they nonetheless all have direct or indirect revenues. Facilities should not be evaluated wholly in terms of self-support, since the external economies may well be far more significant (e.g. effect on national price level of delays at ports due to insufficient capacity or inefficient management may far outweigh the net operating income or losses of the port). It is pertinent to raise the question of whether the railroad is being operated efficiently; whether it should be able to break even; and whether it should contribute to the national budget rather than require subsidization. Similarly the airport user charges, and gasoline taxes need to be studied to determine how far the air and road users should be subsidized as a matter of public policy.

5. It must be determined continuously whether the funds allocated could be more effectively spent to meet the same dmand. Even slightly higher specifications for long stretches of road increase total costs greatly. Of equal importance is the designing of the facilities to last and to permit expansion to meet the future demands. While specifications and designs need to be realistic in terms of current and prospective demands, they also need an evaluation in terms of maintenance costs; if road specifications and designs are not sufficiently durable, the savings incurred by the lower initial costs are more than offset within a relatively short period of time by exhorbitantly high maintenance requirements.

Criteria other than "meeting demand" should also be applied to the transport and communication program. Some such criteria, as the effect on costs and prices, are implicity included in demand analysis. Other criteria, such as effects on employment, income, private enterprise incentive, and the balance of payments, are not part of demand analysis. In the future, these tests should be included in the analysis and planning of transport and communication facilities. Finally, the social benefits of improved means of transportation and communication must be coonstantly evaluated and weighed in the decisions made.

IV PROGRAM ANALYSIS

A ROADS: THE GENERAL PROGRAM

Construction of motor vehicle roads in Iran began about 40 years ago. Major road arteries were developed connecting the capital with the population centers and following the old caravan trails. The principal highways developed ran from Khorramshahr to Tehran, Baghdad to Tehran, Tabriz to Tehran to Mashad, from Tehran through Qum to Isfahan, and from Kashan to Yazd Road construction continued into the 1930's, but most resources for transportation in the period 1927 to 1938 were devoted to the Trans-Iranian railway By the start of World War II there existed over 20,000 kilometers of national highways and Ostan roads of gravel or dirt surfacing. During World War II the Allies found it necessary to repair and asphalt the highway connecting Khorramshahr with the northwestern part of the country as well as the Khosrovi-Hamadan road, in order to facilitate the flow of military supplies to the Soviet Union. Except for the wartime construction, few roads were developed, and more significantly, road maintenance virtually stopped Concurrently, however, the country became increasingly dependent on vehicular transport for trade, commerce, and communication. In 1327 (1948) about 27 thousand cars, trucks and buses were on the highway, by 1330 (1951) there were already 43.6 thousand, which increased to 64.7 thousand by the start of the Second Seven Year Plan, reached 85.1 thousand by 1336 (1957), and today we estimate that close to 100 thousand vehicles are operating in Iran.[1]

With road construction and maintenance not having kept pace with vehicular demand for many years, Iran was left in the late 1940's with a highway network badly in need of major construction and development. In 1949 the Overseas Consultants, Inc., after surveying the country's roads, reported that "Practically all the roads of Iran require reconstruction or new construction in greater or less degree to provide the easy and economical transport of goods and passengers between distant points which is essential to the economic development of the country".[2] The OCI reviewed the roads previously selected in the First Plan, and while adding one small segment, concluded that the list included the major roads which they would recommend for development, amounting to 11,462 kilometers. It is not clear how the original roads were selected, but the OCI made their selection giving priority to (1) roads connecting resources to centers of consumption, (2) roads connecting seaports to the interior, (3) roads connecting major centers not having alternative means of transport, e.g. rail, and (4) the geographical distribution of road development projects. The OCI had recommended the major north-south highway as the Tehran-Isfahan-Shiraz road in recognition of the railroad connecting Khorramshahr and Tehran; however this recommendation was not followed in the road construction program.

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[1] From police licensing reports and Customs Year Book for imports.

[2] Overseas Consultants, Inc. "Report on Seven Year Development Plan for the Plan Organization of the Imperial Government of Iran", Vol. IV page 26.

In the First Plan a selection of roads was made and a sum of funds allocated, but there was no preliminary engineering to indicate that the roads could be built for that sum. There is no evidence of any clear specifications having been established for this road program, and hence the program was an open-ended one of "digging in the dark". The OCI has found that "no surveys had been made of these projects to determine the quantity of earth to be moved, or the number or size of bridges, so that our /OCI/ estimates are necessarily based on judgment, guided by an inspection of the actual costs of reasonably similar work".1/ With a specification for first-class arterial highways of a roadway of 8 meters with surface of water-bound macadam of 6 meters (later to be asphalted after settlement of the road), the OCI estimated that the recommended 11,462 kilometers could be developed up to specification with an expenditure of 2,355 million rials at the then current level of prices and rates of exchange. The expenditure per kilometer foreseen ranged from 100 to 400 thousand rials, averaging about 250 thousand rials. It was assumed by OCI that all the roads would be constructed by the Ministry of Roads. The oil crisis kept this program from being carried out.

In 1334 the Second Plan provided for the improvement and construction of 10,700 kilometers of road with an expenditure of 10,593 million rials, as follows.

TABLE 2--SECOND PLAN ROAD PROGRAM

	Number of Kilometers	Million Rials	Rials per Kilometer (000)
Ministry of Roads construction and asphalting of road	1,200	1,200	1,000
Ministry of Roads construction of road	3,500	1,779	510
Consulting Engineer (John Mowlem under P.O.) improvement and construction of road	6,000	7,614	1,269
	10,700	10,593	990

The current major road program (i.e. the portion under consulting engineers) is of only 2,441 kilometers of road and costing 11,850 million rials, or about 4.85 million rials per kilometer. The substantial increase

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1/ Overseas Consultants, Inc. "Report on Seven Year Development Plan for the Plan Organization of the Imperial Government of Iran", Vol. IV, Page 26.

in the estimate kilometer cost of roads since the start of the Plan is due primarily to (1) increased labor, material and equipment costs, (2) increased specifications as to which (11 meters) and asphalting (7.8 meters), (3) increased specifications as toweight bearing strength of the major highways (13 tons per axle), and (4) consultant fees.

1 The Current Road Program

The total road program during the current Plan period has thus become one where the Plan Organization is constructing 2,441 kilometers of highways consisting of the major highway between Khorramshahr and Bandar Shahpour to Bandar Pahlavi, the western highways and the road from Roudehen to Babol, while the Ministry of Roads, using Plan Organization and regular budget funds, is responsible for the development of 3,671 kilometers of major highways and provincial roads In addition the Ministry has launched a program to maintain 8,055 kilometers of roads utilizing equipment purchased under an Export-Import Bank loan of $17 million, and aided by a contract with the U S Bureau of Public Roads to utilize this equipment effectively and help develop the Ministry of Roads.

Primary emphasis of the current road program has been to rehabilitate the major highways in Iran, which had fallen into disrepair and lagged for behind the vehicular demands of the nation's economy. With this major emphasis and commitment, the construction costs originally understated and actual costs rising, relatively few funds were available for provinvial roads Furthermore no government funds were originally set aside for the development of the access or village roads known as "feeder" roads. In the revised program about Rls.250 million has been now allocated for a feeder road program which is designed to enable villages to bring their products to market at reduced costs, to encourage the expanded use of productive resources, and to enable health, agricultural extension and social services to reach the villages.

Feeder Road Program

Limited and abortive efforts have been made to develop village and feeder roads in recent years Some have been constructed under the Community Development Program from village funds and with the aid of USOM, and others have been built by landlords and the Army. The Ministry of Roads has not had either the legal responsibility nor the resouces to mount such a program However, the lack of funds has not been the major limiting factor to the construction of such roads; the main problem has been the lack of organization and technical skill needed to span the distance between the nation's capital and the villages. A program has now been initiated with the joint cooperation of the Ministries of Interior, Roads, Agriculture, Industries and Mines, and Plan Organization. This program will be under the direction of the Ministry of the Interior, and will utilize Plan Organization and USOM funds and technical assistance. Feeder road engineering construction teams will be formed to aid the designing, costing and constructing of feeder roads The engineering constructing teams will be Ministry of Interior employees, paid by Plan Organization from $1.3 million which has been allocated for the purpose. The construction costs will be borne on a 50-50 basis between the Government and the villages with the government share coming from the Plan Organization (currently allocated $2.0 million) and USOM contributions (currently allocated $0.5 million).

While far more attention and funds need be applied to be secondary roads and feeder roads in the current and future programs, the largest share of funds for the road program will necessarily be allocated to the major highways, not only because of the larger cost per kilometer. This fact also puts a high premium on the better planning and use of these funds to meet more of the major demands mor adequately within the limited resources available. Furthermore, the problem of planning for the future is immediately upon us. The current program is committed and under construction, with little change possible at this stage. The major highways being constructed by Plan Organization under the supervision of the consulting engineers have been agreed to and the specifications established. Some segments are completed, some have been contracted for, but all are scheduled for completion by mid-1341. Only funds allocated by Plan Organization to the Ministry of Roads for construction under their supervision might be reprogramming after the current use of these funds has been examined more carefully to determine whether they are being effectively utilized.

2. The Future Road Program

a. **Timing of the Program:** It requires about two and a half years to develop engineering plans to a point where bids can be offered for tender. The planning for the major road program in the next Plan period must be started soon. A sum of $5.3 million has been provided in our current program for this planning and engineering. If these funds are utilized properly, the funds allocated for contruction in the next Plan period can be utilized far more effectively be assuring that the construction undertaken can be completed within the cost estimates, that the road specifications are consistent with estimated traffic densities, and that the roads selected reflect the proprieties based on traffic demands and alternative means of transportation.

b. **Future Needs:** Upon completion of the current program, there will still be some 9,600 kilometers of major highways in need of varying degrees of development. Approximately 550 million dollars would be needed to construct these roads to the specifications used on the current major highway program. Such a sum is far beyond the road funds which could be expected in the next Plan. Since the traffic requirements on these roads would not call for the same level of specifications or stage of completion, the planning problem is to select from this total those roads of highest priority and standards to which they should be brought. These decisions must be made within the limits of resources allocated.

Already some 4,000 kilometers of major highways have been tentatively selected for Phase I engineering; this consists of reconnaissance to identify major work task and initial estimates of the costs required to develop a road up to traffic demands. From the results of this work, a further selection of approximately 2,300 kilometers will be made on the basis of relative traffic demands, the required standards, and estimated construction costs The Phase II engineering will be initiated; this involves detailed planning on the 1,700 kilometers selected to the stage of offering the roads for tender. This procedure should assure that the country will use its road funds in the most effective ways; furthermore, this advance planning will assure that there is a road program ready to start as soon as the Third Plan begins.

c. Road Construction Supervision: It is not being assumed that in the next road program all major highways will need to be constructed under the supervision of foreign consulting engineering firms As soon as it can be shown that the Ministry of Roads is capable of supervising the construction of the roads so as to assure that the roads built will live up to the specifications and be constructed within the cost estimates, the road program should be transferred to the Ministry. Recent experience indicates that the Ministry does not yet have either the personnel or the organization to assume new responsibilities in addition to its current maintenance work Little road construction of adequate quality has recently been achieved with the construction funds allocated to the Ministry by the Plan Organization

d. Better Use of Resources: A significant relationship exists between road specifications, road costs, and maintenance costs The higher the specifications, the higher the construction cost and the lower the maintenance costs. Today the major highways are being constructed to withstand truck loads of 13 tons per axle load, although the international standard is only 8 tons per axle load. This higher specification was determined because many trucks in Iran are badly overloaded. Axle loads over 18 to 20 tons are not uncommon, and it was recognized that, due to the resistance and the political pressure of truck owners, no axle-load limit of less than 13 tons could be enforced in the foreseeable future This increase of specification from 8 to 13 tons has increased the cost of building the 2,441 kilometers of major highways by about 40% or $45 million -- an amount approximately equal to the total cost of the Karaj Dam. Furthermore, despite current efforts of the Prime Minister and the Ministry of Roads, there is no assurance even now that the Government can enforce the 13-ton axle limitation. There is thus a serious danger that a relatively few truckers w ill be undermining this costly national investment. Obviously maintenance and reconstruction costs as well as highway safety are also a function of limitation on truck wieghts. Unless the weight limitation can be enforced, Iran will continually need to allocate far more funds than necessary not only to the construction of roads but also to their maintenance and reconstruction. This would be a national folly which Iran can ill afford

If truck weights can be limited, obviously more roads can be constructed with the funds available. Similarly, specifications on the width, thickness, and surfacing of roads should be re-examined in the light of expected traffic demands so as to better utilize available funds. Specifications have continually crept upward not only because of the axle-load issue but for other reasons as well: the desire of Plan Organization to be assured that its roads will meet with public approval; the desire of the Ministry of Roads for roads which will be easier and cheaper to maintain; and pressure from the consulting engineers willing and anxious to construct better roads.

Re-examination of road thickness, width, and surfacing specifications in future program is obviously called for when recognition is given to the fact that a road of 11 meters width with a 7-meter width asphalt carpeting of 5 cm. depth is approximately one-third more costly than the same kind of road with 1-6-1 dimensions (i.e., two one-meter shoulders with 6 meters of asphalt in between).

3. Summary

The current road program of the Plan Organization has attempted to rehabilitate the most important national highways which had not been pace with the traffic requirements. Higher costs, increased specifications, lack of control over truck axle loads have all distorted the program in the direction of greater concentration on major highways at the expense of fewer secondary and feeder roads. Relatively fewer roads have been constructed with the funds available and, with the overall reduction of total development funds, investment in roads has been at the expense of other sectors of the economy. The planning and control of the next road program should gain from this experience.

B. PORTS

1. The General Condition of Ports

Iran must depend primarily on her ports and ocean going transport facilities for her international trade. International rail connections with central Iran exist only with the USSR, at Julfa. Road connection with Turkey, Iraq and Pakistan are inadequate and costly for bulk transport of commodities. Air cargo is prohibitive except for emergency shipments and for commodities of high value per volume and per kilo. Therefore, the Iranian ports, and particularly those on the Persian Gulf, can and do significantly affect the ease of international trade and the prices and costs at which the trade moves.

Congestion in the ports has existed for many years. This reached a state of emergency in the fall of 1958 with ships waiting as long as 40 days for a berth. This condition significantly increased the cost of imports, shrank the development funds by increasing financing and inventory and commodity costs, led the shipping companies to impose transport surcharges, and also limited export possibilities, thus having an unfavorable effect on Iran's balance of payments.

In 1334 Iran's international ports were not adequate to handle at reasonable cost the country's current and prospective trade requirements. The problem was twofold; (1) port facilities have fallen into disrepair since World War II when they were reconstructed by the Allies to handle the supply pipeline of the USSR, and (2) an archaic and proliferated port administration existed ~~which~~ hindered rather than aided the expeditious transfer of goods between ships and inland transport facilities.

2. The General Port Program

In the Second Plan appropriation 2,487 million rials were allocated to port development. This sum was to be spent for (1) necessary repairs to existing facilities at Bandar Pahlavi, Khorramshahr, Bandar Shapour, and Bushire; (2) expending the facilities at Khorramshahr and Bandar Shahpour; and (3) building a new deep-water port at Bandar Abbas. The program implied that despite the maladministration, repair work and new capacity were essential for international trade. From our review this appears to have been a valid decision.

By the end of 1337 the repaid and construction work at Khorramshahr was approximately one-half completed with the jetty extension of 360 meters well under way, and the warehousing and port equipment and trackage being developed. The jetty at Bandar Shahpour was being reinforced, extended and widened. At Pahlavi the collapsed jetty was being restored, port repaid equipment was in place, and the port warehousing was completed. The work at Bushire and Bandar Abbas had been planned and engineered, but no construction had yet been started.

3. Trade Volume and Port Capacity

International trade of Iran, exclusive of oil, in 1334 was at a level of about 1.3 million tons annually, and the port facilities were able to handle about 0.96 million tons under then current administrative practices. The facilities planned were intended to provide capacity to handle 1.85 million tons annually without any improvement in administration. By 1337 international trade had reached a level of 1.8 million tons; by 1341 approximately 2.1 million tons can be anticipated; and by 1345 the level may be about 2.6 million tons.[1] It is quite obvious that expansion of physical structure alone cannot provide for adequate port capacity, but improved administration is also essential to handle the anticipated volumes. Port capacity is, of course, a function of the effective use and operation of the series of facilities -- jetty space, longshoremen, railroad capacity, handling equipment, transit and warehousing space, etc.

It is estimated that the facilities currently in place and planned for completion by 1341 (even excluding and development at Bandar Abbas) can, under reasonably efficient administration, achieve an effective working capacity of at least 2,0 million tons and probably as high as 2.6 million tons annually. Therefore it is imperative that the current repair and construction program be completed and that improvements in port administration be introduced as rapidly as possible.

Without basic reforms in port administration, no program of development expenditures is ever likely to bring Iranian ports to a condition that will permit them to serve their functions with reasonable efficiency.

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[1] These estimates were derived in an Economic Bureau study, "Iran's Foreign Trade, An Analysis and Projection", November 1958. These estimates have not been revised despite recognition of limiting factors which have since come to light. Therefore these trade estimates may well be too high.

It currently appears that there will be sufficient port capacity in Iran by 1341 to handle the expected level of trade until approximately 1343 or 1344, assuming reasonably efficient administration. This gives the Government sufficient time in the next few years to reevaluate the situation and to engineer and construct additional capacity in due time as necessary. However, it is recommended that careful re-estimates be made periodically of the prospective international trade level for comparison with the port capacities planned.

4. The Future Port Program

In the course of the program review it became clear that the total costs of the original port program, like most other programs in the Plan, had risen well beyond original cost estimates. The complete port program, if allowed to go forward, was estimated to cost 3,990 million rials; this was considerably more than could be justified in the light of the shortage of Plan Organization funds. Reduction had to be made in all sectors, and in the port program it appeared most important to complete the program in Khorramshahr, Bandar Shahpour, Pahlavi, and Bushire. This meant deferring the construction of Bandar Abbas until the next plan period rather than continue with all the projects knowing that there would be insufficient funds to complete them. Also, to make the port of Bandar Abbas useful, a major road to the interior has to be developed. At present there is no prospect of any funds for building that road in the current program. Therefore Bandar Abbas construction was deferred, despite the fact that there is little doubt that this port should be constructed in the next Plan period and will eventually be the major port to serve the south-east and eastern regions of the country. The port of Bandar Abbas, according to the consulting engineers' advice, is the only reasonable location for a deep-water port east of Bandar Shahpour in the Persian Gulf or the Gulf of Oman. It will provide a port for the Kerman and Baluchistan area, and also, indirecly, for land-locked Afghanistan. The economic justification of this port is largely prodicated on the mineral exports anticipated from the Kerman area. The geological survey completed by the Kerman Development Corporation this last year indicates that while there appear to be significant ore resources in Kerman, much more geological work needs to be done before entrepreneurial interest can be expected. The timing of the geological development of Kerman further justifies the postponement of construction at Bandar Abbas. However, construction plans for the port are being completed up to the point of tender documents, and it is anticipated that the construction of Bandar Abbas and the inland road (preliminary plans for which are also being made in the current program) will have a high priority in the next Plan.

There are both political and economic reasons to look to Bandar Shahpour as the port in which additional port capacities for the western sector of the Persian Gulf should be planned, if necessary. Although the port loocation is blessed with natural deep water, a scarcity on the Persian Gulf, it is devoid of fresh water, labor, or facilities for habitation. Even the land needed for warehouses, offices, and housing is lacking at the site, and much of the cost of future development would go to the providing lad, by fill, for port facilities and in developing the twon for Sar Bandar, to which water must be piped. These difficulties and high costs suggest utilising the natural deep-water port by providing the necessary jetty, handling equipment, transit sheds and rail facilities, but then to move the goods out of the port area to Ahwaz for customs, warehousing, and other port administrative activities. In this manner the natural resource (deep water) will be utilized to its macimum and yet the extraordinary costs of moving lnd, labor, and potable water to this disolate and difficult area could be kept to a minimum. Befor committing future funds to the expansion of Bandar Shahpour, this approach to the port development should be thoroughly explored.

While the capacities of the ports must be continually reassessed in light of revised trade projections, they must also be reassessed in terms of the progress in developing the port's administrative efficiency.

Port Administration

On the basis of a report from a consultant of the IBRD in July, 1959, recommending a unified port administration, all the authority of the various ministries dealing with port matters was transferred by the Prime Minister to the Minister of Customs and Monopolies, who now is responsible for the port operations. A proposed draft law to be presented to the Majlis has been prepared, further unifying administration and financial control and paving the way for an indipendent port authority and administration in the future.

While this law establishes a central port administration under the Minister of Customs and Monopolies, in itself it does not assure as independent port authority, separated from the custom functions. Nor does it provide an expeditious and effective service and facilities to transfer exports and imports between ocean going and inland transport. Before we can be assured of a port administration which will make the most effective use of port facilities and which will aid rather than impede the economic development of Iran, port administration separate from the custom function must be established.

It is also most essential, once this port authority has been established, to develop a planning group within the authority to review continuously the actual and working capacities of all the ports and to plan for future capacities as called for by the trend in trade. These plans and programs must also be integrated with the inland transport and communication programs which will form the transport and communications programs for Iran based on the country's development requirements.

C. RAILROADS

1. The General Railroad Program

The north-south railrod from the Persian Gulf (Bandar Shahpour) to the Caspian Sea (Babar Shah), a distance of 1,388 kms. was constructed during the period 1928 to 1938, and financed from a special tax on tea and sugar. Prior to its completion plans were made to construct an east-west railroad linking Tabriz with Mashad, another 1,522 kms. of rail construction.

By World War II only about one-half of the east-west railway was completed; construction stopped during the war, although the Allies built 120 kms. of railroad from Khorramshahr to Ahwaz during the war to increase the capacity of movement of material to the Soviet Union.

In 1949, when evaluation the costs and benefits of continued expansion of the rail facilities, the Overseas Consultants concluded that:

> "The building of these [rail] roads was a matter of public policy, and is still a matter of public policy".

with the basic considerations being non-economic; the report stated that

> "had these railroads been conceived as profit-making enterprises, it is doubtful whether they would have gone beyond the stage of engineering reconnaissance. In spite of the large amounts which have been spent on them the remaining amounts required for their completion are somewhat lage in comparison with their prospective earnings. As a matter of fact, the line from Kashan to Yazd has no foreseeanle prospect of earning anything, and its completion is not recommended at this time".[1]

However, the Overseas Consultants did recommend completion of the line to Mashad, rather than the line to Tabriz, since the costs for completion were less and the alternative road facilities were worse or non-existent. Few funds were available before the Second Plan for extension of the railroad.

In 1334 a total of 6,244 million rials was appropriated for railroads. The amount exceeded one-quarter of the funds for transportation and communication, and represented almost ten per cent of the total Plan. The appropriation was dsitributed as follows:

TABLE 3--SECOND PLAN RAILROAD PROGRAM
(Amounts in Million Rials)

	Rials	Per cent Distribution
Completion of Mashad-Tabriz line	2,829	45.3
Study and construction of other lines	1,415	22.7
Purchase of equipment and facilities	2,000	32.0
TOTAL	6,244	100.0

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[1] Overseas Consultants, Inc. "Report on Seven Year Development Plan for the Plan Organization of the Imperial Government of Iran", Vol.IV, pp.24-25.

On purely economic grounds, the 6,244 million rial appropriation appears to have been extraordinarily high in comparison to the 10,599 million rial for roads, 2,487 million rial for ports, and the 1949 cost estimated of 1,765 million rials for completion of the Mashad-Tabriz line. In addition the railroad had other sources of financing. An unknown amount was received from the British from was traffic claims; the railroad received a grant in 1953-54 of one million dollars from the United States for spare parts for rolling stock and equipment for the repair and maintenance of track; and in 1956 and Export-Import Bank loan of $53 million was established for dieselization of the line. In addition suppliers' credits were extended to the railroad from U.S. and French firms for the purchase of rails. The railroad itself, out of its own revenues, has been able to make capital improvements which were estimated at approximately $40 million over the period 1954-57.

By the end of 1337, 4,685 million rials of Plan Organization funds had been spent. Tls.3,042 million went for the completion of the Mashad-Tabriz line and the remainder for the purchase of equipment and facilities for the existing system. The Mashad line went into operation in May 1597 and the Tabriz line in 1958. Except for the extension of the line from Qum to Kashan and on toward Yazd, construdted with the railway's own resources, and a short spur from Bandar Shah to Gorgan, no further extensions have been started.

2. The Future Railroad Program.

Future extension to the railroad system have been suggested, incliding (1) a link between Tabriz (actually Sharafkhaneh) and Ghotur on the Turkish border; (2) extension of the line to Yazd and Zahedan to connect with the Pakistan railroad; (3) a southern spur to the cities of Isfahan and Shiraz from the Qum-Kashan line; and (4) a rail link between Kerman and the port of Bandar Abbas.

From an analysis of the relative costs and benefits to economic development, it is quite clear that far more care than has been shown previously should be applied to the question of whether transport funds might not be more effectively utilized on facilities other than railroads to meet the transport requirements of the nation. Railway transport is most economic when large quantities of bulk commodities are moved over relatively long distances; surprisingly few commodities in Iran today fit into that classification. Oil, which at one time contributed over 60 per cent of the railroad's revenue, is being lost to pipeline transmission as a more economic method of transport; today only 40 per cent of current revenue is derived from oil. Freight revenues account for between 70 and 75 per cent of the total ISR receipts, with the heaviest traffic being from the Persian Gulf ports to Tehran. A railroad's revenue must be based on its freight traffic to break even or show a profit, and the railroad has been receiving stiff competition and loss of freight traffic not only to the expanding pipelines, but also to the rapidly-growing trucking industry. From the points of view of limiting losses of trucks, increasing the service rendered by the railroad and limiting the depredation of the highway through the overloading of trucks, it would be advisable for the ISR and the Government to investigate the possibilities and economies of the railroad offering either "adapto-truck" or "piggy-back" service.

It cannot be determined whether the Iranian State Railway is breaking even or not; but it is most doubtful that capital costs are being covered as well as operating expenses. From an estimated capitalization of $315 million, it appears that the current excess of receipts over working expenses falls short of covering capital costs of $15 to $19 million a year. It appears that with improved service, better operating techniques and better use of equipment, and the development of a promotional rate structure, the Iranian State Railway might well advance forward, contributing to the national budget rather than being a frain thereon as it is now.

While the major railway program of the current Plan has been completed, the railway annually submits to the Plan Organization requests for funds for equipment. It is impossible to evaluate either the need for this equipment or its justification without information from the railroad about its total equipment program, the various ways in which this is being financed, and the need to utilize development funds for this purpose. As soon as possible the railroad should develop a construction and equipment program, based on their estimates of traffic and cash flow, so that the future planning and allocation of funds can be made on a sound factual basis.

D. AIRPORTS

1. The General Airport Program

Distances are great between the larger cities of Iran and between Iran and the coutries of the world with which Iran has trade and a community of interest. Alternative means of transport are slow, often arduous, and sometimes non-existent. These facts create a natural demand for air transport for both domestic and international. This demad has been increasing rapidly; international traffic at Mehrabad airport and Abadan has risen from 26,000 passengers in 1333 to over 90,000 in 1336; cosmetic commercial air traffic had reached 4.47 million passenger-miles by 1337.

Prior to 1334, a more or less regular service of one or more flights a week was supplied by Iranian Airways with rebuilt DC-3's. Only Tehran could then be considered a first-class or international airport. Abadan had an airfield capable of accommodating DC-4 aircraft, and airports of some sort did exist at Tabriz, Mashad, Isfahan, Shiraz, Ahwaz, Bandar Abbas, Kerman and Zahedan. But only the Kerman and Zahedan runways were paved, having been developed by the Allies during World War II. None of these cities has air terminal buildings for passenger accomodations.

In contrast to the situation some 10 years ago, today we find approximately 60 scheduled international flights a week at Mehrabad; some 90 scheduled domestic flights to 14 cities in Iran; as many if not more domestic charter flights; and various international air cargo flights. In addition the Iranian Air Force, using civil airports, has increased the air traffic and put increased demands on the facilities. Iranian air transportation both domestic and international appears to be increasing at a rate in excess of the average traffic growth elsewhere.

In analysing the demand for air transportation and the facilities which this transportation requires, it is necessary to recognize that the basic requirements, particularly for international airport facilities, are becoming more elaborate. Ten years ago an airport which could accommodate DC-4 equipment and had directional radio sufficed. Today, the size and speed of international aircraft have developed to a point where runways need to withstand greater weights, to be longer, and when more elaborate and costly radio and nagigational aids must be provided to attract any international carrier traffic at all. This is, of course, a world—wide problem, but it affects a country like Iran more severely since Iran did not have airports which adequatly met the standard of international air transportation some years ago.

In 1334, a total of 1,387 million rials was appropriated in the Plan Law for airport development and sub-allocated as shown below. Also whown are the expenditures through 1337, and the provisional allocation for 1338-41.

TABLE 4--AIRPOTY PROGRAM AND EXPENDITURE
(Amounts in Million Rials)

Airport	Original Program B approved by Joint Committee[a] (1)	Expenditure 1334-37 (2)	Provisional Allocation 1338-41 (3)	Total (4)=(2)-(3)
Mehrabad	141	181	237	418
Five other major airports[b]	511	134	835	969
Second class airports (15)	433	3	112	115
General Expend. & Equipment	-	494 [c]	98	582
TOTAL	1,085	812	1,282	2,094

[a] The total program was for 1,387 million rials. The difference of 302 million rials was the Emergency Commitments and Program A projects for which airport breakdown is not available.

[b] Abadan, Shiraz, Isfahan, Kermanshah and Yazd. No funds spend on Khorramshahr or Yazd.

[c] Most of this sum was spent on Mehrabad, but it is not possible to give a separate breakdown of expenditures for Mehrabad and other airports.

It will be noted that major revisions of both the absolute and relative amount of funds for airport construction have occurred. Some of the revision was inevitable when actual construction costs exceeded the estimates, and when specifications were necessarily revised to accommodate the advance in technological development in international aircraft and their airport requirements. However, much of the distortion was unnecessary and was due to the lack of any detailed planning. Thus there has been no edaquate framework to guarantee achieving, within the resources available, a balanced airport program which would meet both the domestic and international requirements.

The distortion was aided and abetted by Plan Organization in requesting and engineering consulting firm to prepare designs for only six major airports (Tehran, Abadan, Shiraz, Isfahan, Kernashah and Yazd). The firm's proposal for these airports came to 2,123 million rials, an amount far exceeding the original appropriation and providing no funds for airports of lesser import. The net effect of the lack of careful total planning and control for the original airport projects, the recommendations of the consulting engineers, the increase in specifications and construction costs at Mehrabad, and the lack of forward costing to determine the remaining resources required to complete projects already started -- all these factors have caused over one-half of all airport appropriation funds to be allocated to one airport, Mehrabad. This imbalance has resulted in a lack of financial resources to complete other projects.

Unless realistic planning and costing is done for the remainder of the program and unless there is a tight control over the expenditure of funds at each airport, it is apparent that a repetition of the Mehrabad situation will occur, with a relatively poor allocation of funds resulting in inadequate construction to meet the air transport demands. This is quite apparent when it is recognized that the minimum costs for completing both Shiraz and Abadan airports, the two of primary current priority, already for exceed the original cost estimates and have prossed the allocation of airport funds substantially upward.

2. The Future Airport Program

To put the available funds for the airport construction program to most effective use in the remainder of this Plan period, and to form a base for planning the priority of requirements in the forthcoming Plan period, it is essential that the current and prospective plans be reevaluated in terms of (1) prospective traffic demand at the various airports; (2) construction and equipment requirements by years to put the airports into operational condition to meet these demands; and (3) a DGCA budget to determine the ministerial funds required to perate and maintain the airports once constructed. Such a budget should specifically indicate the funds required, by airport, for maintenance, operational costs, and training.

In this planning, care must be taken both to take account of military demands and requirements on civil airport facilities, and the possible use which the civil traffic might make of military air installations (e.g., Dezful) as either regular or emergency facilities. Also, a study should be made of the airport user charges for both domestic and international carriers to determine whether the users are covering a fair share of the contruction and operating costs, and whether the incidence of charge is correct.

Consideration should also be given to the management of the user charges by DGCA, with a view to their becoming the direct recipients of charges collected, to be used for airport maintenance and operations.

E TELECOMMUNICATIONS

The domestic and international communication facilities and services of Iran for which Plan Organization funds have been committed include postal service, long line telephone service, radio, and telegraph. Demands for communication services increase as domestic and international trade and commerce develop and as the nation is more closely knit into a homogeneous social, economic and political unit, as incomes rise and as travel increases. While it is most difficult to quantify the demand for communication services in Iran, we know that most facilities are sadly inadequate and between many important centers even non-existent; that telegraphic message transmissions are delayed for days due to overloading of facilities; that long-line telephonic communication where it exists is often incomprehensible.

Rls 1,596 million were originally appropriated to develop the communications system of Iran; almost 40 per cent of it was expended by the end of 1337. However, relatively little is known about the communications program since it has been next to impossible to translate the expenditure data of the Ministry into meaningful program statements. Funds have been allocated and budgeeed annually for one-line items such as "equipment", "construction", or "postal facilities".

The allocation of 528 million rials for the period 1338-41 appears to be well justified if they find expression in programs designed to meet some of the more urgent communication demands. It is, however, most dificutl to analyse a program when there is neither an indication of the demands for communications facilities nor a clear statement of the proposed program. Intuitively, rather than through any analytical studies, it appears that the communication facilities, both within the country and with foreign countries, have lagged far behind demands and have impeded the efficiency and effectiveness of the trade and commerce in Iran.

Furthermore, it appears that since neither the needs nor the programs have been spelled out properly, the communication subsector has not received a balanced allocation of funds for development.

The Economic Bureau is currently working with the Ministry of Post, Telegram and Telephone in an attempt to better assess the nation's communication needs so as to assure that the lack of facilities will not undly impede the nation's development from either an economic, political, or social standpoint.

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PART FOUR

INDUSTRY AND MINES

(Chapter III of Plan Program)

PART FOUR

INDUSTRY AND MINES

(Chapter III of Plan Program)

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INTRODUCTION

There is a widespread belief in Iran that a higher degree of industrialization is essential to the countr's economic development. This view is correct in the sense that industrialization will lead to:

1. An increase in employment opportunities,
2. Higher incomes for both workers and employers, and
3. The increasing substitution of domestic for imported goods wherever this can be done advantageously.

A vigorous program of industrial ivestments was started by Reza Shah nearly 30 years ago as part of his program for modernizing the country. Indeed the overall level of government investment during the 15-year period before 1320 was surprisingly high; it was unquestionably higher than that planned for the First Seven Year Plan, and it probably exceeded even the much higher level of the Second Plan.[1] Since national income was considerable lower pre-war than today, the proportion of national income devoted to capital formation during that period was significantly higher than even the present high level. The pre-war level of saving the investment was made possible by high tax collection plus rigid controls on the cost of labor (oil royalties were then an insignificant part of government resources).

The proportion of government investment devoted to industry and mining during the pre-1320 period was much higher than it has been during either the First of Second Plan. about one-third of the investment of 1305-20 was in industry and mining, compared with around 15 per cent in recent years. By 1325, when studies for the First Plan were begun, the Government owned and operated 34 industrial and mining establishments, plus a considerable number of cotton gins, tea factories, rice mills and similar semi-industrial facilities (see Table 1.)

This comparison of pre-war and present levels of industrial investment is made simply as a statement of fact and not as an unfavorable commentary on the Government's current policy toward the level of public investment in industry. On the contrary, the current policy of favoring non-industrial investment in the Government's program is probably a wise one in the present circumstances of the country. In actual figures, Chapter III was allocated 15 per cent of the Plan's total resources -- 10.6 billion rials out of the 70 billion in the Plan.

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[1] The best estimate of total government investment during the 1305-20 period puts it at $750 million in then-current values; $260 of this (35 per cent) is estimated to have been in industry and mining. The Iranian price level is conservatively estimated to have risen fourfold over the average for 1305-20 period; This gives an estimate of $3 billion in terms of present values. That figure represents an average annual investment of $200 million or $1.4 billion for seven years. The Second Plan comes to about $1.1 billion, while the First Plan came to about $650 million in present values.

We have compared total government investment during the pre-war period with Plan investments during the post-war years. It should be noted that there is considerable government investment activity that goes on outside the Plan allocations. When the total level of current government investment is taken into account, the absolute level during the Second Plan period probably exceeds that of the pre-war level.

The low priority given to industry and mining in the Plan is somewhat misleading, since this is the principal sector of the economy where private investment provides a strong supplement to the Government's. Indeed, the unexpected strength of private industrial investment (excluding mining) is probably the most important development in the industrial life of the country during the Plan period. This high level of investment, however, appears heavily dependent upon the Government's liberal credit policy. When private investment is added to public, it is probably true that there is a larger volume of investment in industry than in any other sector of the

TABLE 1--GOVERNMENT INDUSTRY IN 1325

I. Factories and Mines

8		Beet Sugar Factories
1		Cement Factory
4		Cotton Textile Mills
1		Silk-weaving Mill
1		Jute-eaving Mill
1		Oil-seed Mill
1		Refractory Brick Factory
1		Cpeer Refinery
1		Cannery (Fruit and Vegetable)
1		Sardine Cannery
1		Factory Manufacturin a variety of small products
3		Chemical Plants (Glycerin Soap; Sodium Carbonate; Hydrochloric Acid)
1		Wood Creosoting Plant
9		Mines (Iron, Copper, Lead, Sulphur, Manganese, Salt, Chromite, Coal).
34	=	Total

II. Other Establishments

25		Cotton Gins
9		Rice Cleaning Plants
5		Tea-processing Plants
39	=	Total

economy.[1] This statement applies to 1337-38 when both Plan Organization and private investment in industry are gigher then they are expected to be during the latter part of the Plan period. Plan Organization's indutrial expenditures are scheduled to end in 1339; private industrial investment is expected to fall off moderately because of a reduction in the availability of capital following the exhaustion of the currency-backing revaluation fund.

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[1] It is more difficult to estimate private investment in agriculture than in industry. This would include, of course, not only the purchase of agricultural tools and machinery but the clearing of land, planting of orchards and groves, digging of wells and irrigation channels, ghanat construction, additions to animal herds and flocks, fencing, agricultural buildings, etc. It is certainly possible that agricultural investment may excedd industrial. In talking of "industrial" investment, the oil industry is excluded, since its importance justifies treating it as a separate sector of the economy.

I. THE OBJECTIVES OF PLAN ORGANIZATION'S INDUSTRIAL PROGRAM

It was noted in the general introduction that the Second Plan was framed primarily as a financial document that made allocations of funds to investment sectors, but did not contain physical targets nor any explanation of the philosophy governing the financial allocations. Nevertheless, the Plan's approach to industrialization does seem to have been guided by five unwritten objectives:

1. To assure the availability of essential consumer goods, free of the disruptions caused by international events. This policy finds expression in Article 1 of the Law, where the Government states the intension of producing "public necessities within the country". This policy underlies the large investments in sugar and textiles.

2. To lay the basis for a greater broadened pattern of industrialization by starting the domestic production of iron and steel.

3. To assure tha availability of cement, perhaps the most important construction material for civil works.

4. To demonstrate to provate investors the feasibility of certain industrial and mining projects by making initial investments in industries and previously carried on in the country. This policy underlies the proposed Plan Organization projects in paper, polyvinyl chloride, oilve oil extraction, the canning plants (found in the budget of Cahpter I), some of the mining projects,and the cane sugar experiment in Khuzestan.

5. To assist private investment by giving suggestions, technical assistance, and credit or credit guarantees. The exercise these functions Plan Organization was authorized to establish a bank or similar specialized agency (Article 10-D). This purpose is reflected mainly in the allocation for industrial credit in sub-Chapter 13.

When one adds to these objectives the secondary objective of completing state-owned plants whose construction was begun before the Second Plan, and of expanding others, one can account for nearly all the projects and funds approrpiated for Chapter III.

These objectives are perfectly understandable as far as they go. However, as proper criteria for the allocation of investment funds they are defective in that they do not focus attention on a comparison of costs and benefits -- i.e., on some measurement of what the Government will get ofr its money. Furthermore, the Second Plan does not indicate the range of alternative available and the system of priorities that ought to govern investment decisions.

It is a fundamandal principle of economic that a country's resources -- its labor force, its managerial talent, its land and mineral resources, its foreign exchange, and its capital funds -- can be put to a large number of alternative uses. In deciding how to use the country's resources, one must first consider the possible alternatives. Decisions should then be made on the basis of a comparison of the costs and benefits involved in the various competing uses so as to make the best use of resources. A national planning body, like a development bank or a private entrpreneur, should look for those projects which promise to return the largest benefits in relation to the costs involved. This does not mean that government should be guided only by "profit" as that term is commonly used; a public body must take into account a wider set of benefits than those which normally govern private investments. It is the business of economics to try to measure cost and benefits and to show where a country can get the most for its monyr, and to warn against investments where the costs may exceed the benefits.

The only way to measure "costs" and "benefits" is to reduce them to monetary terms. For example, if we went to compare the costs of providing employment to labor either by encouraging the growth of small-scale village industries or by attracting surplus village labor to cities for employment in large-scale factories, the costs can be calculated with a sufficient degree of accuracy. The term "benefits" covers a number of desirable objectives, such as the following:

1. The addition to national income
2. The rate of profit on the capital used
3. The amount of employment or wage payments generated
4. The amount of foreign exchange that will be saved or perhaps created through exports.

The money value of such direct benefits and perhaps other indirect benefits flowing from a project can be estimated for any industrial investment. The unwritten objectives of the Plan Organization industrial program do not include any comparison of costs and benefits in laternative projects. One result of this lack of attention to proper economic studies -- to the comparison of costs and benefits in alternative projects -- will be a number of industrial projects where the benefits will be very low in comparison with the costs.

II. THE INDUSTRY PROGRAM IN DETAIL

The general pattern of Plan Organization's industrial program is given by the following table which shows, for each sub-Chapter, the distribution of Chapter III's legal appropriation and the estimated expenditure for the Plan period.

TABLE 2--DISTRIBUTION OF APPROPRIATION AND PROBABLE EXPENDITURES FOR THE SECOND PLAN: Chapter III
(Amounts in Million Rials)

Sub-Chapter	Appropriations *		Probable Expenditures	
	Amount	%	Amount	%
1. Completion of state-owned factories and mines	360	2.8	170	2.5
2. Textiles	1,792	14.1	2,783	41.0
3. Sugar	2,448	19.3	527	7.9
4. Cement	2,398	18.8	1,701	25.0
5. Mines	272	2.6	118	1.7
6. Copper foundry	96	0.7	--	--
7. Basic steel plant	2,453	19.4	408	6.0
8. Refractory materials	48	0.4	--	--
9. Fisheries	119	0.9	55	0.9
10. Laboratories	54	0.5	3	Neg.
11. Vocational centers	88	0.6	128	1.9
12. Industrial cities	144	1.1	34	0.5
13. Industrial credits	1,145	9.0	723	10.7
"B" Credits	1,200	9.5	115	1.7
TOTAL	12,612	99.6	6,765	99.7

* Including the 20% addition to each sub-Chapter approved in 1336.

We postpone to the next section a comparison of actual expenditures with the appropriations. Here we are interested in the apprpriations as a reflection of Parliamentary hopes for the industrial sector.

The establishment of a basic iron and steel industry -- a 20-year objective of the Government -- received the largest appropriation. Almost equally large funds for direct investment were appropriated for sugar and cement, with slightly less for textiles. Three-quarters of the Chapter's appropriation were intended for the construction of new state-owned plants. Nine per cent of the appropriation was to be used as a loan fund to assist private investment. The proportion of funds used to complete state-owned factories was, in practice, much larger than suggested by Table 2: much of the textile appropriation, all of the sugar funds except those for the

Khuzistan project, some of the cement and mining and fisheries funds, all of the sub-Chapter 6 and 8 funds, and some of the B credits were to be used either to complete or expand exisiting state factories. Setting aside these completion-expansion projects, we are left with a program that has attempted to establish of twelve new production untis to be owned entire by Plan Organization or its subsidiaries:

1. A cotton spinning and weaving mill at Shahi
2. A textile finishing plant at Shahi
3. A jute mill at Shahi
4. A basic iron and steel plant, near Azna

5,6. Two new cement plants (Loshan and Doroud)

7. A fishing company in the Persian Gulf
8. An olive oil mill at Rudbar
9. A paper mill (Khuzistan and Caspian coast)
10. A sugar mill and refinery at Ahwaz
11. A gold mine in Muteh
12. A chemical fertilizer plant in Ahwaz

Four of these establishments (the steel mill, the gold mine, the paper mill, the Ahwaz fertilizer plant) have been dropped from the current Plan Organization program, which will thus consist of eight new plants and no new mines. The Plan period will also see the construction of three new demonstration canning factories plus two new dried fruit processing plants; these are financed from the budget of Chapter I (Agriculture) and are not discussed here even though they may be considered industrial projects.

In addition to the above projects, Plan Organization has contributed money to the establishment of a "mixed" public-private textile mill at Shush; to one new wool scouring plant now owned and operated by the Iran Carpet Company; and to the establishment of four pedal-loom cooperatives intended to improve the lot of handloom weavers in Isfahan, Kuypayeh, Yazd, and Kerman.

A small proportion of the budget was earmarked for non-production purposes. About two per cent was appropriated for assistance to vocational training, an industrial laboratory and the creation of a Bureau of Standards. Most of these non-production projects are sponsored and directed by the Ministries; Plan Organization furnishes funds but has not been closely asciated with the planning or control of the projects.

Not all of Plan Organization's industrial activities found expression in specific appropriations. Article 9 of the Law gives Plan Organization the responsibility for making "adequate efforts for safeguarding and strengthening small urban and rural handicraft industries". The only activity under this handing has been the attempt to establish four pedal-loom cooperatives; this was done with Point IV assistance and was a carry-over from the First Plan. In effect, the Plan Organization has not given any attention to this neglected and little-understood sector of Iranian industry. The first need here is for research so that people may understand how much this sector of industry produces, what its capital requirements are, the volume of employment it provides, its needs for power, raw materials, marketing assistance, and similar questions.

A second important policy area mentioned in the Law concerns the disposal of Plan Organization factories. The Law does not require but it does permit Plan Organization to sell its plants (in part or in whole) to private buyers. The Management adopted a policy of selling off these plants, and took steps preparatory to offering them for sale. This general policy, although frequently opposed by government officials close to company operations, has been supported by the Council of Ministers and by the Minister of Industries and Mines. Good work in appraising each factory and mine has been done during the first half of the Plan period; this has been carried out by an Iranian team under the general direction of a consulting firm attached to Plan Organization. The actual sale of plants, however, has been extremely disappointing.[1] The major reason appears to have been the unworkability of the policy of selling the plants for a full cash payment instead of offering credit terms. Early in 1338 the policy of selling for cash was revised to permit credit sales. The major problems now likely to affect plant sales are (1) the reluctance of private buyers to assume responsibility for the surplus labor found in nearly all government plants and mines and the apparent inability of the Government to relieve potential buyers of this problem; (2) the reluctance of the Government to write down the capital value of several plants to the point where private bids be found acceptable; and (3) some continuing uncertainty about the wisdom of trying to sell off all plants and mines instead of taking a selective approach and retaining some units in the public interest (mainly to assure fair treatment to employees and suppliers of raw materials). It should be noted that the 13 government sugar mills have been treated separately since the start and have never been considered candidates for disposal.

(In mid-1959 all Plan Organization companies were transferred to the Ministry of Industries and Mines; the only exceptions were the Loshan and Doroud cement plants and Shahi textile mill No.2, all of which were either not completed or had not yet passed their start-up period. With this transfer of plants went also the responsibility of disposing of them to private buyers).

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[1] By the end of 1337, 58 separate plants had been appraised. Of these, 38 had been offered for sale through public auctions. By Shahrivar, 1338, three cotton gins had been sold to private buyers and 10 rice mills and tea factories had been transferred to the Ministry of Customs and Monopolies.

III. COMPARISON OF EXPENDITURES WITH APPROPRIATIONS

The Law originally appropriated 10.6 billion rials for Chapter III; with the 20 per cent supplement approved in 1336, the appropriation came to about 12.6 billion rials. As Table 2 shows, however, Plan Organization will spend only about 6.8 billion rials -- just over half the intended amount. Instead of spending 15 per cent of total Plan funds, Chapter III will spend only about 8 per cent. Why will the actual expenditures be so much smaller than originally planned? The main reason is the dropping of several projects from the Plan Organization budget; efficiency in executing projects has not been a source of savings. On the contrary, almost all projects have cost more than originally anticipated.

A. CHANGES IN THE PROGRAM

Several projects once considered part of the program have now been dropped; certain others have been reduced in size. It should be pointed out that the program as it existed in mid-1337 was a somewhat larger program than that provided in the Law. In particular, the steel project was, in financial terms, four times larger in 1337 than at the time the Law was passed, and a paper mill costing over one billion rials had been added. These increases, plus unexpected cost increases in projects already going forward, meant that the program as it existed in mid-1337 would have cost perhaphs 50 per cent more than 12.6 billion rials during the Plan period. The dropping of some larger projects not yet started and the reduction in others has now reduced the program to 6.8 billion rials; this is 5.8 billion below the Parliamentary appropriation. In effect a substantial part of this reduction represents a shift of funds from Chapter III to other Chapters.

The following list shows the nine projects that were considered part of the program in mid-1337 that have since been dropped from the Plan Organization program:

1. Completion of Shush textile mill
2. Molasses plant for Abkuh and Chenaran sugar mill
3. Expansion of capacity at Rey cement plant
4. Rehabilitation of Aminabad copper foundry
5. Rehabilitation of Aminabad firebrick plant
6. Establishment of a paper mill
7. Establishment of a polyvinylchloride plant
8. Establishment of an iron and steel mill
9. Establishment of a chemical fertilizer plant.

The dropping of these projects from the Plan Organization program does not mean that all the projects have been stopped. Two of the more important, the steel and chemical fertilizer projects, have been transferred to the Ministry of Industries and Mines and are still going forward as part of the

Government's total insudtrial program.[1] The Sugar Company has taken over responsibility for financing the Abkuh-Chenaran molasses plant out of its own resources.

Four other projects have been reduced in size though not eliminated from the Plan Organization program:

Mineral prospecting (65 per cent reduction)
Vocational training for soldiers (80 per cent reduction)
Industrial city of Karaj (65 per cent reduction)
Loan fund for private industry (35 per cent reduction)

The elimination or reduction of these projects mainly reflects the necessity of reducing the Plan Organization's total program from around 115 to 87 billion rials. It should also be noted that two of the major projects -- the steel mill and the chemical fertilizer plant, together accounting for about one-third of the Chapter's program -- were transferred to another part of the Government's budget outside Plan Organization. In general, it can be said that many of the projects eleminated or reduced were not good ones; therefore it is no loss to see them frustrated or postponed by a shortage of funds. This comment also applies to the steel project, which has never had the kind of careful economic and technical study such a huge project ought to have. During the first half of the Plan period, the steel industry section of Plan Organization made considerable progress in proving up the ore body near the site chosen for the mill (i.e. at Chamsabad, about 80 km. from the Azna mill site). By 1338 the Economic Bureau had indentified the economic and technical questions that required systematic study before a decision could be made as to whether or not an integrated steel mill would be an aid to development or a serious waste of the country's money, time and administrative resources. The Bureau's judgment, based on the available information, was that even under favorable assumption the integrated steel mill under consideration in 1337 could produce steel only at a very high cost, would be likely to need a substantial annual subsidy from the government budget, and would provide much less employment than other projects that could be financed with the same amount of capital. The identification of iron ore and coal reserves in Kerman, which were potentially much better than those available at the Azna site, raised a serious question about going ahead at that location.

The cut-backs reviewed in this section resulted primarily from pressures generated by the overall shortage of funds. Financial shortages, however, have not been the main bottleneck in Chapter III. Much more serious have been the lack of sound planning and delays in construction.

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[1] Strictly speaking, the steel project has not been transferred to the Ministry but to Mr. Sharif-Imami, the incumbent Minister. The Ministry's fertilizer project in Shiraz is not the same one that had been under consideration in Plan Organinzation; it was developed independently by the Ministry, and launched before Plan Organisation's projected plant at Ahwaz. The Ministry's decision to build a plant made it unwise to proceed with the Plan Organization project.

B. COST OVER-RUNS

Although the Chapert's expenditures will be less than foreseen in the Law, two of the major sub-Chapters (textile and sugar) will run much higher than originally planned. Both these programs were big ones to begin with, so that cost over-runs will involve a heavy unexpected claim on funds. The textile investments will cost about 75 per cent more than the appropriation, while sugar mill cost about one-third more (the sugar excess is entirely accounted for by increased costs on the Khuzistan canes sugar project; there have been some savings and cut backs on other sugar projects). The one other large sub-Chapter, cement, will spend close to its appropriation; however, this does not mean that the cement projects have been well-planned and well- executed. The two major investments, Loshan and Doroud, have cost respectively 70 and 100 per cent more than their contract estimates. It is difficult to say how much of these excess costs might have been avoided. However, these high capital costs will make it very difficult for either Loshan or Doroud to operate without government subsidies.

Loshan cement plant had to close down three and a half months after its official opening because of inability to make the grade of cement required by the Sefid Rud dam. This difficulty is currectly receiving urgent attention.

Work on the textile and sugar projects was either under way when the Second Plan started or began shortly thereafter. These projects therefore developed a momentum early in the Plan period, and have exercised an insistent claim on resources; this is especially true of the textile projects. When big projects exceed their cost estimates by big margins, they require heavy shifts of funds from other uses. A major result of this process has been the exhaustion of funds by the larger projects which started early, leaving no funds for many of the smaller projects which were intended to start late. In Chapter III, as in other Chapters, "the big fish have eaten up the little fish". This means that it has been impossible to regulate the distribution of expenditures among sub-Chapters and years according to the distribution given in the Law. The Law has thus had to give way to the practical necessity for flexibility.

IV. THREE POLICY QUESTIONS REGARDING THE INDUSTRIAL PROGRAM

There are several observation and lessons to be noted from the progress of Plan Organization's work in the industrial field. Since much of what follows will sound critical and self-righteous, let us state very clearly that it is not our purpose to find fault with people, but to evaluate how things were done so as to improve matters in the future.

The basic phylosophy underlying the program has been a continuation of that followed for the past 30 years. This policy has been that the Government should assume responsibility for (1) the establishment of key consumer goods industries (textile and sugar), aiming at self-sufficiency; (2) the establissment of key capital goods industries (cement and steel); and (3) demonstrating a few promising industries in the hope of encouraging private investment. We may note one major policy change from the Government's traditional industrial philosophy instead of long-term government ownership and operation of plants, it has recently become government policy to sell off government plants and mining establishments to private buyers. This important policy change reflects a recognition that plants are not operated as efficiently under government ownership as they are under private ownership.

The main criticism to be made of the Government's industrial policy is that it is conceived within too narrow a framework; it is not enough to be guided by a policy of self-sufficiency over a narrow range of goods. A proper economic appraisal requires that a much wider range of industries be taken into account; a new assessment needs to be made of the proper roles of government and private industrial activity and of the possible relationships between them; and a wider range of basic objectives must be considered. Each of these three points needs a brief comment.

A. A LIST OF POSSIBLE INDUSTRIES

People concerned with Iran's growth must have in their minds a general conception of the kind of economy they would like to see develop in the years ahead. This vision or "model" of the future involves such general characteristics of the country as the transportation and educational systems, the regional distribution of population, the degree of urbanization, whether the food supply will be mainly domestic or imported, and the general occupational distribution of the labor force. People must also develop conceptions of the more specific patterns they would like to see develop in particular sectors. The development of a model for the industrial sector begins with the drawing up of a list of those industries which seem appropriate to Iran's needs and resources, both natural and human. An industrial program based on this kind of systematic review of alternatives avoids the dangers of haphazard projects and leads to a faster and healthier rate of growth.

The preparation of a list of "candidate industries" requires careful study and analysis. This list itself should be supported by a discussion of the key factors governing the choice of industries. Such a list is of course only a "first approximation", to be used as a rough guide for public discussion and policy recommendations. While the Economic Bureau has a number of preliminary ideas about the types of industries suitable for the country and about the criteria for choosing them, these ideas need more study. These studies will form the main part of the Bureau's industrial work in preparing proposals for the next development Plan.

At least two attempts have been made to draw up lists of "candidate industries" for Iran. One was done by the Ministry of Industries and Mines in 1337; this was published as a small booklet.1/ The other was prepared in Washington two or three years ago by a firm under contract to the United States Government; this list has not been published. While both of these lists are useful beginnings, they need to be refined and expanded by more thorough studies to determine what industries and mining activities are suited to Iran's needs and resources. Furthermore, the candidate industries should be arranged according to priorities.

The most important fact needed to assess the prospects for any particular industry is the size of its prospective market. The obvious place to start from is present markets, i.e., with facts rather than hopes. A study of the structure of demand for manufactured goods in Iran today would be extremely useful to both the Government itself and to private entrepreneurs. The present attempt in the Bank Melli to modernize the official consumers' cost-of-living index should give valuable information on consumer buying habits at different income levels. A more immediately useful source is of course the annual foreign trade reports of the Ministry of Customs and Monopolies. In addition the annual requirements of the largest buyers in the economy should be made the object of special study, namely, the Government and the Oil Consortium. The oil industry offers a particularly attractive ready-made market for the production of import-substitute goods, although in many lines domestic products would be of lower quality and higher prices (initially anyway). At present the Government does not impose any official requirements on the oil industry for domestic as against foreign purchasing. It would be surprising indeed if there were not many items in the oil industry's list of important products which could be supplied satisfactorily from Iranian sources. Where such items can be identified, the Government should consider a policy of actively discouraging further imports so as to shift demand to domestic producers. Some study of the oil industry's integration with the rest of the economy has been done by a committe organized by the Ministry of Industries and Mines. This work should be encouraged and carried to early completion.

There remains the question of responsibility for drawing up a revised list of candidate industries. It is suggested that Plan Organization invite the Ministry of Industries and Mines to collaborate in this task.

1/ "Priority List of Small and Medium Industries", 6 pp., mimeo.

B. THE RESPECTIVE ROLES OF PUBLIC AND PRIVATE INVESTMENT

During the past generation Iran has built up a tradition of direct government investment in industry and mining. The country has now reached a point where this policy needs review.

The country has had sufficient experience with government investment and management to demonstrate that the state plants are not efficient. This means that the state could use its investment funds and administrative abilities more effectively in other spheres of activity, leaving directly productive activities to the private sector except in special cases. It is not true, of course, that private enterprise is always efficient and public enterprise always inefficient in Iran. But policy must be guided by general tendencies and the Iranian evidence clearly argues for industrializing under private enterprise. Consequently the important objectives must be to secure private planning and supervision of the initial investment and subsequent private management. The Government must still play a large and critical role by providing capital and a favorable climate of policies designed to encourage private activity.

Although reliable statistics on private industrial investment are lacking, all indications point to the existence of a strong and growing upsurge of such activity in the past few years. We estimate that in 1337 and 1338 private industrial investment has been running around $30-$40 million. The import statistics, the issuance of industrial construction permits, and the rapid exhaustion of two public industrial loan funds all confirm the popular impression that the rate of private industrial investment is now significantly higher than it has ever been before. (This phenomenon does not seem to be true of mining). Indeed, there is reason to fear that the rate of physical investment is too high for the managerial capacity of the country. If true, many plants will be operated wastefully until management and labor gain the necessary experience.

The unexpected strength of private investment suggests that the Government should review the extent to which it wishes to continue its earlier policy of direct investment in industry. Plan Organization itself is scheduled to complete almost all of its Chapter III investments by the end of 1338. At present Plan Organization has no expectation of receiving any additional funds that would permit the planning and execution of new industrial or mining projects during the period of the Second Plan. Apart from two very large and exceptional industrial projects just being started by the Ministry of Industries and Mines (i.e., the Shiraz fertilizer plant and the proposed steel mill at Azna) the Government's total investment program for industry during the Second Plan will be completed in 1339.[1] We may thus welcome the fact that private industrial investment will become relatively more important than public in the years immediately ahead.

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[1] The Sugar Company has proposed an investment program of over 100 million rials for 1338-41; this is still not definite and in any event will not be financed with Plan Organization funds.

The strong preference expressed above for private as compared with public industry should not be interpreted as a doctrinaire statement that would exclude all future public investment in industry or mining. There may be room for further direct government investment in industry in certain exceptional cases where private investors are unable or unwilling to move forward. All we are pointing out is that the past basis of government participation in industry (direct government investment followed by government operation within civil service salary levels and rules) is not a suitable one for the future in most cases.

C. A WIDER RANGE OF POLICY OBJECTIVES

The central policy objective of self-sufficiency in key goods leads to investment decisions without much regard for using the country's resources where they can make their largest contribution to the national welfare. When resources are poorly allocated the result is high production cost and a limitation of consumers' choices to produce with high price and low quality.

It is undoubtedly true that a development agency should be primarily concerned simply with an increase in industrial activity -- without excessive concern for the theoretical tests that should ideally govern the choice of industries. Nevertheless, investment decisions must show a reasonable regard for sensible economic criteria or the country will soon find itself in trouble. We are afraid that if more attention is not paid to consumers interests Iranian buyers will find themselves paying much higher prices for factory products than they ought to.

The Government has tended to have two attitudes towards the interest of the consumers of the country. International trade policy has been liberal in the selling of foreign exchange, thus permitting a high level of consumer-goods imports. Tariff levels have been kept low on items not im competition with domestic production. As a result of this trade policy, Iran in recent years has enjoyed a greater availability of imported consumers' goods than most low-income countries.

The situation is quite different in the field of domestic production. Here there is much too little interest shown in keeping prices down so that consumers can enjoy the benefits that flow from efficient industry. The reason for the frequent high prices of Iranian products does not lie in any unreasonable degree of protection against imports given to domestic industries; the Government's policy is certainly protectionist, but so far not excessively so. The main explanation of the country's high costs lies in inefficient production. And generally speaking, the costs in government plants are significantly higher than in private plants.

Production costs are high whenever investment costs are high, operating rates are low, or management is inefficient in buying and using labor or raw materials. Governments are not noted for their ability to keep capital costs down during the construction period, or to develop the markets needed to sustain high operating rates, or to economize in the use of labor and raw materials. The Government of Iran (including Plan Organization) is no exception. A government can, through training programs, improve the performance of its industrial managers. It can also expose its managers to the pressure of publicity so that they are afraid of the consequences of financial reports that reflect badly on their performace. Plan Organization has made a beginning on management-improvement through a training and consulting program conducted under contract with a firm of foreign consultants. However, the financial reports of state-owned firms are not ordinarily published (often they are not available to Plan Organization employees outside the companies' office of Plan Organization except on special request). It is certainly doubtful if the instrument of publicity can be much of an influence on managerial performance under present conditions. Nevertheless there would be everything to gain and nothing to lose by adopting a policy of requiring public reports by state-owned companies.

Plan Organization is in process of adding significant new productive capacity in the textile, sugar, cement and some other industries. The fruits of these investments are just beginning to ripen; production is beginning to expand as one plant after another is put into service. However, it is not much of an achievement to put together bricks and mortar, to assemble some machines under the roof, and to put staff and laborers on a payroll. The real achievement is to do these things at a reasonable cost and to make the plants operate efficiently.

V. CONCLUSIONS

The general points made above can be supported by the following specific comments on the program of the Chapter:

1. Lack of sufficient justification - Before an investment is committed, careful studies should be made of the market for the product, the best location for the plant, the availability and prices of the raw materials, the proper size of plant, the costs of production, the number of employees and their skills, and similar factors. Such studies, done carefully and with realistic assumption, yield a judgment on the feasibility or desirability of the investment, either in terms of benefits to its owners or in wider social terms. Without such studies it is not possible to know what benefits are being bought for the money or how one project compares with others on which the money might be spent. In general, not enough emphasis has been put on such preliminary studies. In many cases they have been based more on hope than on realistic assumptions; this is especially likely to be the case where the study of a plant's desirability is made by a foreign firm interested in selling machinery as well as advice.

Good feasibility studies (or economic "justifications" as they are sometimes called) can never eliminate risks from investments and they are not an infallible guide to the selection of desirable projects. However, they are particularly helpful (i) in identifying especially bad projects and especially attractive ones, (ii) in identifying the crucial variables in all projects, and (iii) in setting standards for the later control of construction and operating costs. The men who make decisions about how to spend public funds are never spending their own money; they are thus removed from the world's strongest pressure for making careful decisions. If one does not believe in careful preliminary "justifications" then the door is opened to letting personal projudices and interests determine the selection of projects. The steel project is an example of a major project that should have had a thorough and independent feasibility study many years ago.

The result of bad planning is bad plants. A very serious result of bad plants is the demoralization of the engineers and administrators who are assigned to them. This is already a problem of some recently completed projects in Chapter III. Men with good training hate to be assigned to "a horse they know can never win".

2. The Cost of Projects: It is the rule rather then the exception that the Chapter III projects have cost significantly more than their original estimates. In other words, we have bought less for our money than we thought we would. Although domestic price inflation has accounted for some of these cost over-runs, the major cause has been faulty planning and an almost complete absence of financial and administrative controls during the construction period. Much "tighter" planning before projects are approved could have saved large sums of money. The division of major projects into large numbers or separate project numbers, each of which carried its separate authorization and subsequent budgetary and accounting treatment, makes for peacemeal rather than consolidated planning, and

results in confusion at almost all points in the system of approvals and controls. The result has been an absence of effective control. It should be noted that considerable progress in the organization of project coding and financial accounting has occurred during the past two years.

3. Construction Delays A majority of Plan Organization's industrial projects have taken significantly longer to execute than originally scheduled. The more important causes of these delays have been the inexperience and lack of equipment of many building contractors chosen to do the work, the over-centralization of Plan Organization's control procedures so that almost no questions are settled at the site but must be referred to Tehran, the interruptions to work caused by temporary shortages of cash and administrative delays within Plan Organization, and the late delivery (or loss) of items of imported equipment which have resulted from the inability of Plan Organization's expediting procedures to overcome the general inefficiency of the port of Khorranshahr.

4. Private Plants are Cheaper than Public Ones: A comparison of the investment costs of Plan Organization and private projects in the textile, cement and oil extraction industries shows that it costs the country much more to build these plants under public than under private entrepreneurship. This result is one strong reason for relying on private investment wherever this choice is available.

5. Inadequate Attention to Agricultural Aspect of Processing Industries: The textile, jute, oilve oil, vegetable oil and sugar mills are all agricultural processing industries (as are the canneries in Chapter i). We have not studied the adequacy of cotton supply for the textile industry; but for all the other industries cited there appears a serious problem of getting adequate quantities of acceptable raw materials to operate the plants at high operating rates. Equally worrisome is the fact that there does not appear to be much concern about the problem among those responsible for these projects. The problem may not be as serious as we fear it may become, but it is important enough to justify a special task-force study by a combined team of industrial and agricultural specialists.

In one industry, sugar, the main problem is the failure of top executives to understand the basic economics of factory operations. The Sugar Company ought to be studying ways and means of expanding its operations by lengthening the grinding season at each mill; this can be done without any significant increase in fixed investment. Instead the Sugar Company is greaing its operating and investment policies to the maintenance of a fixed percentage yield of sugar from each ton of beets. To do this and still increase output will require the establishment of too many factories each of which will operate at too low a percentage of their annual capacity. Such a pattern of development is wasteful and harmful. If these principles were understood and proper attention were paid to the agricultural end of the sugar industry, the profits of the industry could be increased greatly, the output of sugar raised substantially, the employment season extended, farmers' income raised, and the cost of sugar reduced. Paradoxically, although the Sugar Company consistently operates at a financial profit, it is operated very uneconomically.

6. The Importance of Working Capital: We have frequently found that in estimating the capital requirements for particular projects much too small an allowance has been made for the liquid capital needed to operate the plant after it is built. This is a particularly serious problem in the textile projects where the requirements are very large.

7. Lack of Coordination Between Investment and Disposal Policies: Plan Organization has devoted a large proportion (perhaps 50 per cent or more) of its industrial funds to completing, modernizing or expanding state-owned plants that were in existence before the Plan started. After these projects were started it became government policy to sell off the state-owned plants to private owners. This new policy has introduced a new and not altogether convincing justification for investing furhter large funds in government plants. The argument is that only by spending money to modernize these plants can they be put in a condition where private buyers will consider purchasing them. We think this is a very doubtful argument, as past experience with operating government plants in Iran does not indicate that any amount of investment is likely to transform them into profitable enterprises. If this is true, then these plants can only be sold at a considerbale loss to the Government, as the capital must be written down to a level which their operations can support.

The logical conclusion to this argument is that the Government should try to sell off its plants even before the investments are finished. The political difficulties of deciding in favor of such a policy are considerable; but economically such a policy would have been preferable to the present one of "throwing good money after bad". In the future, it will probably be much more economical to sell off state plants, even at considerable losses, than to try to rehabilitate them. This conclusion cannot be tested until a more energetic effort has been made to dispose of the government factories.

8. Surplus Labor and Plant Disposals: The burden of excess employees in government plants is widely recognized (the problem also exists, to a lesser degree, in many private plants). The existence of surplus labor is a serious obstacle to the sale of government plants. The Government has recognized this fact and has approved a policy of compensating employees who may be discharged. So far, however, this policy has not been put into effect with any determination. One reason given is that unfriendly nations might make propaganda use of any dismissals, even if they are made under generous conditions as they should be. We think this is an unnecessarily cautious attitude. If any progress is to be made on this important problem a start should be made immediately before the problem becomes unmanageable. So long as the Government's determination remains weak it will always be possible to find reasons for postponing action.

9. Resources should be undercommitted, not overcommitted: In Chapter III, as overall, Plan Organization has started projects before it had all the necessary money to finance them. Consequently the resource reductions of the past year have forced a cancelling of projects not yet started and cutting back others. There is no room whatsoever for thinking of starting new construction projects for another three and one-half years. This is a pity, for no plan can foresee all possible projects at the start, and some funds

should be reserved in all sectors for adding new projects as time goes by. If funds were available, Chapter III might well add projects in the fields of industrial credits, preliminary studies of particular industries, vocational training, the creation of industrial estates, and perhaps others.

10. Projects should begin small, leaving room for expansion: In more cases than not, the scale of investment seems appropriate to the market situation confronting the plant. However, there are a few examples where it would have seemed wiser to begin with smaller plants and leave room for future expansion if demand proved adequate. This appears true of the Rudbar olive oil mill, for example, and for both the Doroud and Loshan cement plants. Where plants are scaled too big in relation to market requirements the resulting uneconomic condition cannot be rmedied except by the embarrassing device of writing down the capital. Where plants are built on a conservative scale but with built-in room for expansion, an underestimation of demand can be remedied relatively quickly and naturally.

11. The "Demonstration" Function: One major explanation given for some Plan Organization investments in industry and mining is that the Government must demonstrate the feasibility of certain lines of activity before private investors will show any interest in them. This argument probably had much more validity some years ago than it has today when private investment can be found in many industries where the Government has not made any investments. But a more important question is whether a bad demonstration (of which several examples can be cited) serves any purpose that could not be served better through other means. For example, the Rudbar olive oil mill will probably not be a profitable operation; how, then, can it demonstrate the profitability of olive oil mills to private investors? Would there not be more certain and less costly ways of trying to persuade private investors to engage in new lines of activity than by establishing plants that demonstrate failure rather than success?

We do not conclude that the "demonstration" argument is never applicable, although we think it much less important today than it was several years ago. However, we do say that "demonstration" plants, in the rare cases where they may ne justified, have to be planned much more carefully so that they are good demonstrations and not failures.

12. Marketing the products of government plants: Efficient production depends, among other things, on a well-organized sales effort. In the Sugar Company, sales are easy and automatic as everything is sold to the Ministry of Customs and Monopolies at fixed prices. In the Building Materials and Chemical Companies sales are handled by a mixture of private agents and direct sales by company selling offices in Tehran. The Textile Company's output is sold through private agents.

We have more knowledge of the Textile Company's selling arrangement than of any other company, mainly because it is such an unsatisfactory one. There is widespeard criticism of the choice of the principal sales agent for the Company's two largest mills. The Bureau predicts that if there is no change in these selling arrangements the mills in question will suffer seriously from excessing inventory accumulation, low operating rates, shortages of working capital, and low or non-existant profits.

VI. RECOMMENDATIONS

The following recommendations are made to the Management of Plan Organization as a guide to its work in Chapter III during the next three years

1. Only one additional program change: The reduced allocation for Chapter III has already required several specific program changes for the second half of the Plan period. These changes are reflected in the revised allocations. (See Statistical Appendix). The 1.97 billion rials to be spent in 1338-41 are all firmly budgeted for the completion of existing projects. The one area in which new projects are now recommended is that of training (see No.6 below).

2. The main task. Plan Organization's main task in the field of industry and mining should be the development of a clear set of industrial policies, a list of desirable industries for Iran, and suggested improvements in the institutional framework to guide public and private individuals concerned with Iran's industrial future. This work must be done in close cooperation with the Ministry of Industries and Mines.

The successful execution of such a cooperative task will require a clarification of the presently confused and uncertain relationship between Plan Organization and the Ministry, the coordination of Ministry and Plan Organization functions with the new Industrial and Mining Development Bank, and the establishment of more effective liaison with other development agencies and with the private sector.

3. The future of Plan Organization's Industry Division. With the Chapter III program substantially completed, there is a major problem in finding useful tasks for the personnel of the Industry Division. The logical task for this personnel is to use their knowledge and experience in preparing the Third Plan. Consequently it is of the utmost importance to develop with the Ministry of Industries and Mines an agreed division of labor with respect to work on the Third Plan so that a definite work program can be established for members of the Industry Division. Work on the Third Plan by members of the Division would of course be done in close cooperation with members of the Industry Advisory Section of the Economic Bureau.

4. Plant disposals: The policy of selling all government plants and mining establishments should be pursued with vigor. The outcome of this effort is as important for the future industrial structure and efficiency of Iran as the present program of new plant construction. If a more substantial number of plants and mining establishments are not sold by the end of the Plan, the result will be a major failure for the Government in the industrial field.

In the past it has been hoped that these establishments could be made profitable before selling them. Efforts to improve company operations should of course continue; but efforts to sell establishments should not be affected by their existing profitability or unprofitability.

5. Future expansion of the Sugar Company: We recommend that a clear statement of policy be made that will leave the establishment of new sugar plants to private investment.

The Sugar Company is in a position to expand its own output significantly without establishing new plants and without major additions to its fixed investment. At present the Company does not understand its economic situation properly, and is proposing to spend over 100 million rials on new fixed assets between now and 1342. These expenditures are unnecessary and should be stopped. Plan Organization should instruct the Sugar Company to pursue a policy of getting the most out of its present capital investment instead of adding to that investment. Such a policy will focus the Company's attention on a longer operating season and the agricultural policies and procedures that will permit this.

6. New training projects. There is an urgent need to develop additional training institutions and programs. The Manpower Development Division and Economic Bureau should make joint proposals for additional training projects to serve the country's industrial and mining needs.

7. Studies on small industry. The Third Plan should probably include some special programs for small-scale urban and rural industries (those employing fewer than 15-20 persons). However, no useful programs can be prepared without much more understanding of these industries. We recommend that some appropriate agency (e.g., the United Nations, the Ford Foundation, or a private research institution) be invited to recruit a team of 4-6 persons to make a smaple survey of these industries, their problems and their potentialities.

8. Establisment of an Office of Mineral Economics. The mining industry and the Government both need the information on markets and domestic mining problems which could be provided by a small office charged with responsibility for studying mining economics. Such an office belongs in the Ministry of Industries and Mines. No action is required by Plan Organization Management; the suggestion will be discussed directly with Ministry officials by members of the Economic Bureau.

PART FIVE

SOCIAL AFFAIRS

(Chapter IV of Plan Program)

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INTRODUCTION

The Social Affairs sector of the Plan covers three main areas -- health, education, and public utilities for municipalities. The Chapter's legal appropriation also made provisions for contributions to the Central Office of Statistics, to cooperatives, to labor organizations, and for the construction of low-cost urban housing.

The original appropriation was large -- 18.4 bilion rials or 26.8 per cent of the 70 billion rial Plan total. However, the situation has since changed considerably. The section experienced considerable difficulty in developing its programs and generating a high level of expenditures. The mid-Plan reprogramming has seen nearly a thrid of its appropriation transferred to other Chapters that have been short of funds, and 11.7 billion rials is the present appropriation for Chapter IV. Subsequent reorganizations and personnel changes have considerably improved the section's programming capacities, however, the Chapter's funds have been reduced so severely that the level of future expenditures is now more likely to be held down by a shortage of funds than by inability to spend funds effectively.

The transfer of funds to other Chapters will leave Social Affairs with 13.3 per cent of the 87 billion rial total Plan funds, over twice the resources given to Industry and Mining. The distribution of funds among the major programs is shown in Table 1 below, which gives both the original appropriation and the revised program of 1338.

TABLE 1--DISTRIBUTION OF FUNDS WITHIN CHAPTER IV, UNDER ORIGINAL PROGRAM AND AFTER 1338 REVISION

59/60

(Amounts in Million Rials)

	Original Total	%	Revised Total	%	Expend. 1334-37	Projected 1338-41
1. Public Health	5,169	30	2,707	23	1,173	1,533
2. Education	3,882	22	1,812	15	1,185	628
3. Municipal Develop.	7,247	42	6,882	58	1,995	4,888
4. Statistics and Census	360	2	169	1	118	51
5. Contributions	58	--	98	--	58	40
6. Special Engineering Costs	584	3	incl. in 1-2-3		incl. in 1-2-3	--
TOTAL	17,300		11,668		4,529	7,140

(Note: Total may not add exactly because of rounding; the original total of 17.3 billion rials represents Plan Organization's initial program proposals within the total appropriation of 18.4 billion rials).

The core of the Social Affairs program (health, education and municipal development) involves areas that are vital to modern government everywhere. Plan Organization's role in these areas is one of financing a major part of the capital expenditures necessary to expand the Government's services and to help launch new programs designed to meet urgent problems; the latter function often includes the temporary financing of operating costs as well as the initial capital costs. All of these programs involve substantial programs of construction, and rapid expansion in the need for trained personnel, and major increases in the yearly budgets of the agencies that will administer the new facilities. A major problem is to achieve a reasonable balance among these three factors so that

1. More buildings are now built than can be operated effectively, given the number of trained personnel available in the country.

2. Sufficient people are trained for the number of positions arising out of the programs being planned for the future.

3. The rate of expansion of programs does not run way ahead of the country's ability to raise the funds necessary to support them. If buildings and equipment are expanded too fast, government budgets cannot support them and they will be understaffed, they will not be kept in good condition, their services will be poor, and some may have to be closed down.

In general, it appears that the first and third problem will predominate. More attention to training and more study of the program's impact on future budgets are needed.

In the health and education fields (3% of the Chapter's total) a large proportion of the funds are spent through the Ministries of Health and Education. The remaining funds are spent directly by Plan Organization on behalf of the ministries, which will operate the facilities when completed. Sometimes particular projects or programs originate in the ministries, sometimes in Plan Organization -- there has been no clear definition of responsibility either for programming or for executinn. But every project raises a problem of cooperative programming between Plan Organization and the ministries. During the first half of the Plan period, satisfactory relationships and programming procedures were not worked out, with the result that money was not spent effectively. In general, it is not too much to say that the original conception of Plan Organization's relationship with these important ministries -- that effective programs would be developed because Plan Organization would not give funds to the ministries unless the latter presented well thought out programs -- was frustrated by the inexperience of both ministerial and Plan Organization personnel and by the failure of Plan Organization to give sufficient leadership in developing sucj skills. To the technical inexperience of officials on both sides of the relationship must be added the important psychological lact that high ministry officials have tended to regard Plan Organization's funds in their field as "their" money, due them as a right and not subject to withholding if the fail to submit programs approved by Plan Organization. Another source of friction has been the inability of

Plan Organization to develop firm budgets early enough in any year to give each ministry a definite statement of the amount it could expect from Plan Organization. Poor ministerial budgeting also made it extremenly difficult to see how Plan Organization funds and programs fitted in with those of the ministries. Within the past two years, however, there have been marked improvements in Plan Organization's budgetary procedures.

The municipal development program is not planned or executed in cooperation with any ministries. It is executed directly by Plan Organization working through consulting engineering firms and local contractors selected by competitive biddings. The problems encountered in this program will be reviewed later; at this point we simply note that the conception of this program -- providing matching grants to the 285 municipalities of the country -- is imaginative and sound. It combines principles of simplicity, fairness, local initiative, and local fiscal responsibility in a program of considerable political and social impact. As Table 1 shows, less than a quarter of the scheduled expenditures for this large program had been spent during the first half of the Plan period. The impact of the program will thus be felt mainly during the next three years.

A. BIAS TOWARD URBAN BENEFITS

The division of funds between rural and urban areas is of interest because of the size and condition of the rural population. Although no exact calculation is possible showing where funds will be used, it is clear that the Social Affairs program gives much more emphasis to urban than to rural improvement. The municipal development program alone accounts for over half the funds; in addition, a large proportion of the funds for education and health will be spent in cities and towns. On the other hand, one important rural program -- aid to cooperatives -- is unlikely to leave any significant lasting result.

We call attention to the urban bias in the program mainly to state the fact and not to register a strong complaint. For polititcal and institutional reasons it is much easier for gorvernment to spend money in cities and towns than in rural areas. However, these areas do present the country with some of its more imprtant and difficult social problems. In the future, the definition of reasonable targets for rural programs and the creation of institutions around which programs can be organized must receive higher priority in planning Social Affairs programs.

B RELATION TO GOVERNMENT BUDGET

Some perspective on Plan Organization's role in total government expenditures for social projects is given by Table 2. This shows both Plan Organization and regular government expenditures (budgeted) in the fields of health, education, and municipalities, 1335-38.

TABLE 2--COMPARISON OF PLAN ORGANIZATION AND OTHER GOVERNMENT EXPENDITURES IN THE FIELDS OF HEALTH, EDUCATION, AND MUNICIPALITIES, 1335-1338
(Amounts in Million Rials)

	1335	1336	1337	1338
1. Plan Organization	actual			
Health	326	404	340	435
Education	336	297	365	328
Municipalities	90	149	749	1,437
Sub-total	752	850	1,454	2,200
2. Other Government (ministries)	budgeted			
Health	580	774	974	1,066
Education	3,584	3,895	3,705	5,700
Municipalities	(354)	(354)	(354)	354
Sub-total	4,518	5,023	5,033	7,120
3. TOTAL: 1 plus 2	5,270	5,873	6,487	9,320
4. Government's Total Budget Excl.Plan Organization)	19,800	20,800	29,000	31,200
5. "Other Government" Social Expends.% of Total Budget	22	24	17	22

The above table shows (sub-total 2) that the "other government" expenditures on social affairs rose 56 per cent in the three years 1335-38. This expansion represents a mixture of expanded investment expenditures by the ministries plus (more importantly) the rising trend of recurring expenditures necessary to operate the expanded program. Despite these rising non-Plan Organization expenditures on social affairs, their share in the total budget has not changed significantly over the past four years. However, the contribution of Plan Organization to the Government's total expenditures on social affairs has risen from 14 per cent in 1335 to an estimated 24 per cent in 1338. (Sub-total 1/3). This suggests that well over a quarter of present public expenditures in this area are for program expansions -- new buildings, new equipment, and the launching of new programs.

Plan Organization funds are of course the main source of finance for construction and equipment in the fields of health and education. But they are not the only source; the Ministry of Education has a substantial funds of its own earmarked for construction purposes, while the Ministry of Health has a much smaller fund. The Ministry of Education has available each year about 100 million rials from its own budget, plus up to 90 million rials from municipalities, plus about 50 million from endowments. The total of 240 million rials per year is less than the yearly average of 300 million spent by Plan Organization during 1334-37, but is more than the 209 million that will be available annually during the last half of the Plan period. Quite clearly, Plan Organization is making a much larger contribution, proportionally, to the construction of health buildings than it is to educational facilities. This is not surprising, as the Health Ministry is much younger and smaller than the Ministry of Education.

I. PUBLIC HEALTH

The health sector includes five parts: operations, training, construction of health facilities, equipment of institutions, and contributions to health organization. Table 3 shows the distribution of funds for the program as revised in 1338. Of the total funds, 67 per cent are devoted to health operations in the field of preventive medicine directed against nine specific diseases. Approximately 18 per cent of the health funds will go into structures, while less than 12 per cent will subsidize the operating costs of other health institutions. Only 1.8 per cent is being set aside for training, and less than that for equipping medical institutions. Each of these five programs will be discussed in turn.

A. HEALTH OPERATIONS

These funds are being used exclusively for operations in the field of preventive medicine, not for curative programs. These preventive-health programs were in fact the first health activities developed by Plan Organization. It must be understood that the programs are conducted by the Ministry of Health with Plan Organization funds.

The two largest programs (malaria and smallpox) have gone well, substantially reducing the incidence of these two scourges. The malaria campaign, for example, has reduced the incidence of malaria in affected areas from 60-80 per cent down to around 5 per cent. This program, which consists almost entirely of spraying with DDT, was started in cooperation with Point IV personnel and funds but is now almost exclusively an Iranian operation. The smallpox campaign has succeeded in inoculating some 12 million people (60 per cent of the total population) within the past few years. The program will continue with increased funds during the second half of the Plan period. The success achieved during the first half of the Plan makes it realistic to hope smallpox can be eradicated as an epidemic disease within the next few years. This would indeed be a major achievement.

Also of great importance is the "triple vaccination" program begun only in 1338; it is being administered by the same mobile teams that conduct smallpox vaccinations. These teams have succeeded in reaching the rural areas of the country and in persuading villagers to accept vaccinations.

The campaign against tuberculosis, venereal disease, and trachoma have not made as good progress as the vaccination and spraying programs. This is partly because these programs are newer; but the slow progress is mainly because the attack against these diseases is much more difficult. All three of these diseases are very strongly influenced by social factors -- which cannot be touched by spraying or vaccinating. The approaches to each of these major diseases need to be studied much more thoroughly than has so far been the case. Indeed, the first attempt at a trachoma control program got off to such a poor start that it had to be temporarily suspended. As Table 3 shows, it is now planned to spend only one-third as much as trachoma control as will be spent on tuberculosis or venereal disease control. This allocation of funds does not necessarily reflect the relative social importance of these diseases. Relatively little is known about trachoma control and the administrative means of coping with it are weak, so the allocation is only large enough to conduct a pilot project. In point of fact, all three programs will not go much beyond the pilot project stage during the next three years. If enough is learned and enough skilled people are trained, major campaigns against all three diseases can be launched during the Third Plan.

Bilharzia is a debilitating parasitic disease that has long been known in Iran, but it has not become a major potential danger until recently. The main reason is that it is spread along waterways, particularly irrigation channels. The major area of danger at present is Khuzistan, where major new irrigation networks are being planned. The necessary control measures are becoming increasingly known, and a successful campaign depends primarily on their effective application. Effective handling of this problem illistrates the need for coordination between agencies planning development projects (e.g., Khuzistan Development Service) and the regular services of the Government (i.e., the Ministry of Health).

TABLE 3--ALLOCATION OF HEALTH FUNDS
(Amounts in Milliom Rials)

Program	Spent 1334-37	Budgeted 1338-41	Total
1. Operations:			
a. Malaria eradication	544.9	767.6	1,312.5
b. Insect Control	19.5	27.6	47.2
c. Tuberculosis Control	29.2	67.9	97.0
d. Smallpox Control	71.4	95.0	166.4
e. Trachoma Contrcl	9.7	22.0	31.7
f. Venereal Disease Control	42.6	49.0	91.6
g. Triple Vaccinations	6.8	42.5	49.3
h. Bilharzia Control	--	35.0	35.0
2. Construction	175.0	322.0	497.0
3. Training	11.4	37.4	48.8
4. Equipping	8.1	3.2	11.3
5. Contributions	254.8	64.0	318.9
TOTAL	1,173.4	1.533.2	2,706.7

B. THE CONSTRUCTION OF HEALTH FACILITIES

The Ministry of Health has published an outline scheme for covering the country with a netweork of basic health buildings. The scheme envisions basic preventive and curative service buildings in health-service areas. In areas with a low population density the health-service areas coincide with the regular administrative divisions of the Government. In the Ostan capitals large hospitals (90-120 beds) and large health centers are to be established. In the Shahrestans medium-sized hospitals (60 beds) and medium-sized health centers are planned. In small Shahrestans or large Bahshes (20-50,000 people) small hospitals with 25-40 beds will be set up in combination with a health center. In Shahrestans or Bahshes with fewer than 20,000 people a small health center combined with an out-patient dispensary will be built. Eventually every village is to have a rural dispensary.

The foregoing program is at present only a construction program. Even as such no definite timetable has been established for its fulfillment. No program exists for training the additional skilled people needed to operate such a basic national health service, and no estimates have been made of what it would cost to operate such a system. The present construction targets simply represent a modest start toward providing the physical facilities to support such a program sometime in the future.[1] The country will have a considerably expanded set of health buildings by the end of the Plan period, but it will still be far short of the network suggested by the above outline. As noted earlier, the construction program has gone much more slowly than originally hoped. However, the gap between the original construction targets and the probable level of achievement during the Plan period is as much a reflection of unrealistic targets as of difficulties in launching the construction effort and a shortage of funds. The reorganization of the health section in 1337 has resulted in considerable improvement in the section's programming ability. The design of several projects has been brought to the point where contracts can be let and the level of activity will accelerate rapidly. There is every reason for confidence that the level of planned expenditure for the second half of the Plan (twice that of the first half) will be met.

Some indication of the composition and progress of the construction program is given by Table 4 below:

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[1] It is worth noting that more money is to be spent on tuberculosis facilities than on general hospitals.

TABLE 4--THE CONSTRUCTION PROGRAM
(Amount in Million Rials)

I. Completed Projects

1. Finishing hospital in Kashan, Amol, Tajrish	6.7
2. 17 dispensaries and clinics	19.3
3. Shiraz health center	4.3
4. Building Pasteur Institute	8.8
5. Park for mental patients	2.0
TOTAL	41.1

II. Under Construction or Planned	Spent 1334-37	Budgeted 1338-41	Total
	a	b	c
1. Hospitals in Ahwaz, Sussangard, Khoy, Qum, Chalous, Tehran, Firuzgar & Rasht	52.1	107.6	159.7
2. 14 dispensaries and clinits	7.5	10.0	17.5
3. Tuberculosis sanatoria and clinics	36.6	152.0	188.6
4. Materinity and child-care program	22.8	19.5	42.3
5. Nurses' training college (Mashad)	--	3.0	3.0
6. Behyar Schools (Tabriz, Ahwaz)	--	17.5	17.5
7. Venereal Disease Program	0.2	10.9	11.1
TOTAL	119.2	319.5	438.7

I plus II (c): 479.8

C. EQUIPMENT

The equipment program is the smallest component of the total health program. There is good reason to believe that no very systematic planning of equipment has been done, particularly in connection with the new facilities being built under the construction program. The construction budgets themselves do not include provisions for equipment. Therefore the Ministry of Health may well find that its needs for equipment will be much larger than are currently reflected in the Plan Organization allocation for this purpose. In any event, Plan Organization's allocation is not primarily to complete the construction program; it has been used primarily to finance miscellaneous needs of both old and new facilities without being large enough to cover more than a small proportion of each.

D. TRAINING

A surprisingly small proportion (1.8 per cent) of health funds have been set aside for training the additional personnel that will be necessary to operate the new health facilities being constructed. There are small programs for training nurses and behyars (sub-nurses), health educators, and specialists in maternal and child care. Some money is also earmarked for foreign training. Nevertheless there is very little evidence of any careful planning of the numbers and types of new skilled personnel who will be necessary to operate an expanded network of health facilities. Since the construction program is only now gathering momentum, there would still be time to make a rapid study of personnel requirements by 1341 and to expand, within the next year or so, the training program. It must be understood that Plan Organization conducts no training programs on its own responsibility; these are planned and administered by the Ministry of Health.

E. CONTRIBUTIONS TO HEALTH ORGANIZATIONS

About 12 per cent of the health funds will be spent as contributions to the operating expenses of health organizations. These include UNICEF, the Pasteur Institute, an ICA-agreement program, and salary support for foreign experts and doctors working in the Ministry of Health. However, nearly half the "contributions" during 1334-1337 have represented straight subsidization of salaries of Iranian docotrs employed in ministries other than the Ministry of Health. The expense is clearly an operating expense that should fall on the ministries' own budgets. Accordingly, this use of Plan Organization's health funds has been stopped and the cost shifted to the ministries. This change also explains almost all of the reduced level of expenditures under this heading during the second half of the Plan. It is probaly impossible to shift other operating costs to the Ministry's own budget without risking the complete cutting out of support for the activity by the receiving institutions. However, the budget of the Ministry of Health is bound to expand greatly in the years ahead, and if Plan Organization is to concentrate effectively on investment programs it must take a firm position with respect to keeping responsibility for operating and maintenance costs where they belong, which is in the ministries. We would therefore recommend that Plan Organization take steps to eliminate by 1341 most contributions to the operating expenses of other organizations. This could be done gradually by annual reductions over the remainder of the Plan period.

SUMMARY

The health program has started with a sensible emphasis on campaigns against the most widespread and serious popular diseases. The success of these preventive-health programs will measurably reduce the amount of disease in the country and thus increase life-expectancy and the vitality and productiveness of the people. The malaria-eradication program has already achieved dramatic results of great significance. So too has the program of smallpox vaccination. There is every reason to be hopeful of early and widespread benefits from the triple vaccination program started in 1338. Three other preventive programs, however, have not gone far and will need more and better attention if any significant results are to be achieved. Indeed, some expert medical opinion believes that the approach being used in the tuberculosis program ought to be reviewed to see if the objectives and methods pay sufficient attention to Iran's social conditions.

The construction program has suffered from poor programming and not enough regard for what should be done first in view of the limited funds available. This is still a problem. Furthermore, the relation between public and private construction activities also needs more attention (it has had practically none). A question also exists as to the suitability of general-purpose consulting engineers for designing health buildings, or at least the hospitals. Hospital design is a specialized field which requires a background of experience and an understanding of how Iran's special social conditions affect medical care here. The advisability of using specialized firms for hospital design deserves discussion. With respect to other buildings, there appears no reason why standard designs cannot be developed to reduce costly engineering work.

Lack of sufficient attention to the training of personnel seems a major deficiency of the program. Not only does the scale of training seem badly inadequate to staff the new facilities but we also understand that the country is experiencing difficulty in keeping existing positions staffed with qualified people as people retire or leave for other reasons. We strongly suspect that a fairly quick survey will reveal a need to step up health training above levels now being planned.

Finally, it should be pointed out that there are many aspects of public health that are directly related to such social factors as living conditions, food habits, social mores and customs, housing conditions, saniation practices, popular understanding of disease, and so on. The specific social factors important for disease in Iran today are not yet well understood. We therefore recommend that support be given to a modest program of organized social research that will provide the knowledge necessary to the successful prosecution of programs such as the tuberculosis, trachoma and venereal disease programs.

II. MUNICIPAL DEVELOPMENT

A. NATURE OF THE PROGRAM

The municipal development program is a very large program with important economic, political and social objectives. More than half of all the funds for social affairs are allocated for municipal development. These funds will be distributed over nearly all of Iran's 285 municipalities to provide them with one or more utilities that will raise the level of urban life. The types of projects in the program are the following:

1. Electricy supply
2. Safe, continuous water supply
3. Asphalted streets, passable in rainy weather and dust-free in the dry season
4. Miscellaneous (includes several slaughterhouses and public baths, some sewage systems, a few flood control works, and one or two harbor improvements).

No city will acquire all these benefits during the Plan period, but nearly all will acquire at least one. How much is attempted in each city depends in good part on local initiative and local fiscal capacity -- projects are normally financed on the basis of Plan Organization making a grant of 50 per cent of a project whose remaining costs must be financed by the city itself.[1]

The principle of a "matching" grant as thus used in the municipal program is a dramatic & important innovation in relationship between central and local authorities. In a country of very high interest rates and no capital market for bond issues, this device seems fair, convenient and generous. The new fiscal and administrative responsibilities which these investments will create in the cities may have far-reaching effects on municipal government in the years ahead. In the short run the program is generating a level of public investment in urban facilities which is much higher than anything experienced heretofore. The one great area of urban improvement not touched by the program is housing.

From the point of view of expenditures, the program has moved ahead more slowly than any of the other programs in the Social Affairs Chapter. Two explanations are generally given for this, both of which may be correct. On the one hand, it takes a considerable period of time to select projects, engineer them, and put them under contract so that work can begin. This is true even if these tasks move forward expeditiously. But a lagging level of expenditures may also reflect inefficiencies and unavoidable delays that prevent the program from rising to budgeted levels. At present there is no authoritative judgment among those close to the program as to whether it will in fact be able to generate a level of expenditures during 1338-1341 that is three times the level experienced in1334-1337. The issue is an important one, since it affects the amount of money that should be allocated to the program: a 20 per cent shortfall in the predicted expenditures of 4.9 billion rials would provide substantial funds badly needed in other Chapters of the Plan. It is therefore important to keep a close watch on the trend of expenditure in the municipal development program.

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[1] In the case of municipalities with annual revenues of less than 1 million rials the Law allows the city's 50% share to be in the form of an interest-free seven-year loan advance by Plan Organisation. In a few other special cases the municipality's share is provided by an outright grant from the Ministry of Interior (the civil authority in charge of municipal administration).

B. SELECTION AND EXECUTION OF PROJECTS

The particular project(s) for any city are selected by city officials. However, responsibility for the design and execution of projects rests with Plan Organization. The actual design work is done by firms of consulting engineers who also arrange for competitive tenders from local contractors and supervise the latters' work. The sequence of work is divided into the following three phases:

Phase I: After cities select projects they want, the consulting engineers are directed to make a survey and to prepare a preliminary project proposal with cost estimates. Negotiations are then opened between Plan Organization and the municipality for the purpose of signing a contract covering the project.

Phase II: When a project contract between Plan Organization and the municipality is signed, a final project study with precise cost estimates is prepared by the consulting engineers. The specifications and cost estimates must then be approved by Plan Organization's Technical Bureau.

Phase III. The project is submitted to contractors under competitive bidding; upon selection of a winning bid a contract is signed by Plan Organization, and work begins under supervision of the consulting engineers.

As of January, 1959, the distribution of projects among the three phases was as follows:

TABLES 5--DISTRIBUTION OF PROJECTS AMONG PHASES I, II, AND III AS OF JANUARY, 1959

(Amounts in Million Rials)

	Phase I		Phase II		Phase III					
					Ordered		Started		Finished	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Water	220	7,321	130	3,622	35	1,568	17	633	7	184
Electricity	243	4,613	163	1,849	89	788	53	506	3	75
Asphalting	168	3,359	104	1,641	74	1,250	65	1,005	31	590
Miscel.	124	5,508	35	832	12	149	8	95	1	3
TOTAL	755	20,801	432	7,944	210	3,755	143	2,239	42	852

The preceding values represent the total cost of projects, so that they must be divided in half to get Plan Otganisation's share. With Plan Organization allocating 6.8 billion rials for municipal development over the period it is clear that this is far short of what the cities have requested (a figure that is still increasing). On the other hand, only 18 per cent of the value of requested projects has been carried to the contract stage by January, 1959, and only 11 per cent had been started. With many projects now well along in the "pipeline", the number of projects moving through Phase III may be expected to rise fairly rapidly; however, as indicated above, there are important differences of judgment as to how rapidly expenditures will rise. The intended build-up has to be discounted somewhat by the probability of the usual "unexpected difficulties"; the most important of these will be the inability of certain municipalities to meet their financial obligations, the inability of contractors to meet construction schedules, and delays arising out of difficulty in getting imported items through the ports and to the building sites.

Table 5 also shows that the largest number of requests has been for electricity projects, with water systems a close second.

Some indications can be given of the relative average cost of different types of projects; this can be done by dividing total value by the number of projects in each category. The results vary considerably according to whether this is done for the figures given under Phase I, Phase II, or the "ordered" stage of Phase III projects. All measures show, however, that water schemes are much more costly than any other type; electricity schemes turn out to be the least costly of all. The "Miscellaneous" projects turn out to be surprisingly expensive; this is probably misleading in that it is distorted by a few large projects (e.g., some sewage and flood control works) that are not as "typical" as slaughterhouses and baths.

Table 5 also shows that asphalting projects have moved forward much more rapidly than any other kind. This suggests that a high proportion of the money earmarked for such projects will in fact be spent. Electricity projects also appear to be moving relatively rapidly. However, the number of water abd "miscellaneous" projects which had been started in January, 1959, was very low; this is significant since these two categories account for a high proportion of municipal development funds and delays in their programs will lead to significant under-spending in the municipal program.

C. DISTRIBUTION BY SIZE OF CITY

As a matter of policy the program has tried to assure at least one project for each municipality. At the end of 1337 approximately one-third of the municipalities had one project while two-thirds had more. Only a very few towns (about 12) had as many as five or more.

There has been some criticism that a few large cities were getting too large a share of the available funds. The table below suggests that this is not a serious problem.

TABLE 6--VALUE OF CONTRACTS IN RELATION TO SIZE OF MUNICIPALITY
(Late 1337)

				Authorized Contracts		
Size of Town	Number	Population	%	Number	Value	%
Over 100,000	7	1,419,500	31	44	3,858	38.6
50-100,000	9	653,400	14	25	585	5.8
Under 50,000	241	2,533,300	55	397	5,500	55.5
TOTAL	257	4,606,200	100	466	9,943	99.9

From these figures it appears that the smaller towns are receiving their fair share of the funds, as measured by population. The seven largest cities have received somewhat more than their relative size might entitle them to, but the divergence is not very large. Considering the difficulties in gearing contract values closely to population and the limited validity of this objective, the correspondence between population and value of projects seems good.

The actual starting of projects is governed partly by whether or not the towns have paid up their share of the costs and partly by an attempt to achieve some equality among the Ostans in the value of projects going forward. The problem of late payments by municipalities is sufficiently disturbing, even at this relative early stage of the program, so that an awkward policy decision must be made. In January, 1959, 129 of the country's 285 municipalities were one or more months in arrears on their scheduled payments; of these, 44 or nearly a third were behind three months or more. What should Plan Organization do when towns fall behind in the obligations after projects have been started? The choice is between stopping projects until a town demonstrates its ability to meet its obligation or allowing the project to continue and having Plan Organization pay all the bills in the hope that some day the town will honor its debt. Many people feel that once a project is completed towns may make no effort to reimburse Plan Organization. The Bureau shares this view and recommends that projects be suspended indefinitely if a town falls behind by more than two months.

SUMMARY

The municipal development program will provide the country's urban population (about 25 per cent of the population) with important improvements in the convenience, cleanliness, and healthiness of life. Water, sewage, slaughterhouse, baths, and even asphalt projects are all facilities which affect health conditions; they therefore will support the rising trend of preventive health expenditures which has already begun. Some projects also have a direct economic benefit -- e.g., electricity and slaughterhouses. Although Iran is not yet burdened with the costs and social problems involved in unusually rapid urbanization (except in Tehran and Abadan, where growth has been very rapid indeed), the pace of urbanization may accelerate as industrialization gathers momentum and agricultural productivity rises to release people from the land. The municipal development program may be regarded in part as a belated more to prepare cities--physically, administratively, and financially--for demands that may come on many of them very fast in the next decade or two. But this justification is certainly secondary to the tasks of up-grading the quality of town life for the present urban population & stimulating their desire for progress.

The program involves major demands on the municipalities for new labor and managerial skills, for the creation of new administrative institutions and for additional revenues to operate and maintain those of the new projects that are not self-supporting. Several municipalities are expected to have difficulty in meeting these demands. Indeed the specific nature and intensity of these demands have not yet been carefully studied; Plan Organization's Social Affairs Division, in cooperation with the Manpower Development Division, has begun to develop training programs for certain of the programs. Also, analysis of the financial capacities of the cities has been begun by the Iran Municipal Association; but no study has been started specifically to measure the financial implications of the municipal development projects.

To help assure the success of the municipal development program the Bureau makes the following recommendations:

1. Late Payments: Projects should be suspended indefinitely as soon as a municipality falls behind in its payments by more than two months.

2. Training: Immediate attention should be given to the further development of training programs for the later skills, and probably the managerial skills, which will be necessary for the proper operation and maintenance of the new water, electricity, and other schemes.

3. Standardization of Equipment: Easier maintenance and quicker supply of spare parts would result if there could be some standardization of makes and types of equipment used in similar projects. We suggest that the Technical Bureau make a formal determination of whether or not any degree of standardization is practical.

4. Central Service Stations: Central service stations in key cities would permit the maintenance of small engineering and mechanical staffs for the more difficult repair, maintenance, and overhaul work arising within their service areas. We suggest again that the Technical Bureau be asked to submit its opinion as to the feasibility of this suggestion.

5. Fuel Distribution: There is much unevenness in the fuel distribution arrangements in different provinces and districts. An effort should be made to identify those districts where this is likely to be important to the effective operation of projects; Plan Organisation could then intervene with the NIOC to try to secure improved deliveries or storage.

6. Fiscal Studies: Sample studies of the fiscal implications of the municipal development program should be conducted to answer the question as to whether the program may not be burdening towns with heavier obligations than they can carry. This will involve studies of the increased municipal costs and the additional taxes required to bear them. These studies could probably be done most effectively by the Iran Municipal Association; if it is willing to supervise such investigations Plan Organization should support them financially and by the release of suitable personnel for temporary duty in the Association.

7. Debt Financing: No country in the world finances its urban utilities without the development of long-term debt arrangements. Iran cannot hope to rely indefinitely on Plan Organization grants for all types of municipal projects. It is therefore recommended that a plan be drawn up for the experimental use of debt financing for self-liquidating projects in certain cities.

III. EDUCATION

A. NATURE OF THE PROGRAM

Plan Organization finances approved projects submitted by the Ministry of Education,[1] but does no educational planning on its own initiative. The Plan Organization's "education program" therefore consists of those Ministry projects which Plan Organization has agreed to support.

Since the Plan Organization has so far played no role except to support the educational objectives of the Ministry, it is therefore essential to understand what these are and something of educational conditions and problems in the country.

The Ministry's primary objectives at present appear to be (1) the rapid expansion of the primary school system until primary education becomes nearly universal, and (2) the rapid build-up of vocational training in both agriculture and industry in order to support the country's economic development. Much less concern is shown for secondary education, for higher education in traditional fields, and for adult literacy. However, the Ministry's priorities and strategy for educatinal expansion are not altogether clear, as its objectives have been expressed in a few statements about particular programs and not in any rounded discussion of the whole problem.

The Use of Plan Organization's Funds: Rials 1.8 billion or just under one-fifth of the Social Affairs funds are going into education. The broad uses of these funds are shown in Table 7 below.

TABLE 7--THE USE OF PLAN ORGANIZATION'S EDUCATION FUNDS
(Amounts in Million Rials)

	Spent 1334-37	Budgeted 1338-41	Total	%
1. Construction	925.7	489.1	1,414.8	77
2. Equipment	29.4	26.2	55.6	3
3. Printing of Books	20.4	15.9	36.3	2
4. Foreign Study	54.8	21.5	76.3	4
5. Educational Operations	154.4	74.9	229.3	14
TOTAL	1,184.7	627.6	1,812.3	100

Note: For a more detailed breakdown of this table, see Statistical Appendix.

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[1] Small sums are given to a few other institutions, as described below.

The dominant role of construction expenditures is clear from the above figures; note, however, that construction expenditures are expected to fall by more than one-third during the second half of the Plan. Expenditures for foreign study and for operations will also fall. Spending on equipment and on the printing of books are both scheduled to increase substantially.

There are significant changes in the use of the construction funds between the first and second halves of the Plan. From 1334-37 about 55 per cent of the funds were used to complete primary and secondary schools. About a third of the construction money was used on buildings for the University of Tehran. Only about 10 per cent of the money was spent on vocational school buildings. The relatively small proportion used for vocational buildings represents a major change in program emphasis within the Ministry of Education. Early in the Plan it was expected that a much larger sum would be spent on vocational training facilities for relatively low-level industrial and agricultural skills. In effect these funds were shifted into the expansion of general education buildings and the national university. In the second half of the Plan, a much higher proportion of construction funds (about 50 per cent) will go into facilities outside those of the general system, i.e. they will be used for technical schools and institutes, provincial universities, and agricultural training colleges. Provincial universities, for example, are to receive about 30 per cent more funds than privary and secondary schools.

B. THE GENERAL EDUCATION SITUATION IN THE COUNTRY

It is impossible to evaluate the educational programs Plan Organization is supporting, without seeing them in perspective against the general condition of Iranian education.

It is estimated that there are about 2.85 million children of primary school age (6-12), and 2.09 million of secondary school age (12-18). Primary education is compulsory but secondary is not. However, it is estimated that only about 40 per cent of the primary-age children and only 11 per cent of the 12-18 years olds are in school. The average of both groups is 33 per cent. Education is therefore available to Iranian children only to a limited extent. Although there are many shortages of schools and teachers in the cities, leading to frequent over-crowding and too many students per teacher, the cities are of course much better served than the rural areas, which contain about three times as many children. These few facts are enough to make clear that, even with vigorous programs, it will take the country many years to reach acceptable standards of space and student-teacher ratios even for the present number of school-age children. The task is made doubly difficult by the prospect of a rapid increase in the number of children in the near future. No reliable statistical measure of this increase is available; but even with unchanged birth rates the decline in infant mortality is sufficient to expand the school-age population. The problem is so large that even if heavy sums are made available and are wisely spent Iran may still not raise significantly the proportion of school attendance for many years to come. This purely quantitative problem is complicated by pressures from many people to modernize the traditional curricula used in Iranian schools and universities and the need to build up vocational training institutions to serve the country's need for new applied skills.

The Shortage of Teachers It is probably more difficult to expand the number of teachers than the number of school buildings. We have already spoken of the high ratio of students to teachers, this is part of the reason why so many classrooms are badly overcrowded. To train teachers to the desired standard takes three years for both primary and secondary school teachers. Primary school teachers are trained in special secondary schools, called "normal colleges" or "normal schools" from which teachers graduate at age 18. Teachers for non-vocational secondary schools attend training colleges from which they graduate at age 21.

At present the normal schools are able to graduate only about 500 new teachers each year; these are sufficient to teach an additional 12,000 students (assuming 30 children per teacher and making some allowance for the replacement of teachers who retire, resign, or die). If the primary school system expands at this rate for the next 25 years, it will have enough qualified teachers to take care of only 60 per cent of the present number of primary-age children. Even if the output of trained primary teachers can be doubled in the next five years, it would still take 40 years to put the present number of children in classes of 30. These figures make clear why the Ministry is currently forced to hire large numbers of primary teachers without teacher training.

The situation is not so acute at the secondary level because universal secondary education is not a national objective. Nevertheless, even if a much more modest traget is raised the difficulty of reaching it will be great since the present proportion of enrolled secondary-age students is so low. Iran already has immediate need for 3,600 more secondary school teachers. At present there are two teacher training colleges which turn out qualified teachers for ordinary secondary schools (at Tehran and Tabriz). These two colleges have a combined enrolment of about 900 students; at most this means about 250 graduates per year. The Ministry has estimated that if these two colleges could increase the entering classes from the present 400 to 1,000, the need for teachers with college degrees could be satisfied within seven years. As this teacher-training target will not be easy to reach, it is clear that the present shortage of qualified teachers in secondary schools will continue for several years. The shortage can only be made up by using many sub-standard teachers and many overcrowded classrooms.

C. VOCATIONAL EDUCATION

The program of vocational education has been pushed forward with great initiative and energy by the Ministry, even though financial support has been modest and some opposition has risen from educators who minimize the importance of expanding this branch of the educational system.

Just before the Second Plan started, in 1955, there were nine vocational schools in the country with about 1,200 students. By 1960 the number of schools will have increased to 34 with nearly 6,400 students. This is a five-fold increase in vocational training capacity within the short period of five years. However, this expansion is still far short of the training capacity needed to meet the needs of the next few years. Furthermore the expansion of training schools has been uneven, geographically, so that large regions of the country still have no training facility. Even more important is the problem of up-grading the quality of training in the schools that have been established. There are few experienced vocational teachers in the country, and competent teachers, even without experience, are extremely scarce. The same may be said of administrators for the effective planning and running of the schools.

The shortage of skilled manpower is bound to be a major brake on development for some years to come, and a good vocational school system can make a major contribution to overcoming these shortages. It will probably be true, however, that more of the people who will qualify as skilled men ten to fifteen years from now will have acquired their skills without passing through training schools; they will acquire their skills informally "on the job". The great advantage of vocational training is that people learn more quickly and better; the absence of employer-organized on-the-job training programs adds to the importance of school training programs.

Some perspective is given to these remarks by the findings of Plan Organization's Manpower Census, completed in 1337 and published earlier this year. This showed an existing shortage of skilled workers in 1337 of 11,000; by 1342 it is expected that the country will need nearly 24,000 more skilled people than it had in 1337. Against this rapid growth in skilled jobs stand a few training institutions that might, on optimistic assumptions, provide roughly half of the additonal people needed. The vocational schools may be able to graduate 600 to 800 students per year. The armed forces have civilian-related training programs through which pass some 800 students per year. The combined training programs of various ministries add perhaps another 800 people annually. All told, this amounts to about 2,300 graduates per year; in five years this would meet less than half thhe estimated growth in skilled workers.

1. Ammozeshgahs and Honarestans, First and Second-Cycle Secondary Vocational Schools

The vocational school program for non-agricutural skills consists of two types of three-year schools, the first-cycle amoozeshgahs (of which there are 12 with 2,200 students), and the second-cycle honarestans (of which there are 10 with 3,000 boys and 7 with 660 girls). There are five additional combined schools that offer both the first and second-cycle curriculum; however, there is no necessary progression of a student from an amoozeshgah to a honarestan; the former is intended to train skilled manual workers; the latter is intended to train people who will occupy supervisory positions above the level of skilled tradesmen.

At the present time the country has much greater need for graduates of amoozeshgahs than for graduates of honarestans. We therefore recommend that future plans concentrate on expanding the system of amoozeshgahs and go slow in adding to the number of honarestans. There also seems room for developing a two-year ammozeshgah course with a strong applied orientation to its curriculum; this would accelerate the output of skilled tradesmen. Finally, we recommend careful review of the curricula that are being used in the amoozeshgahs and honarestans to make sure that students are being given the kind of training the country needs. The rapid expansion of training schools without paying attention to curricula and quality of teaching might prove extremely harmful.

At present the only planned source of teachers for the vocational schools is the new Tehran Institute of Technology. This major institute will train technicians whose competence will be well above that of honarestan graduates but below that of university engineering graduates. The intended careers of graduates will lie in vocational education. The same buildings will house a new Polytechnic whose graduates will have somewhat more engineering training and whose intended careers will be in industry, not vocational education. This important new institution appears off to a good start and deserves strong support.

2. Agricultural Training

Agricultural training and education are presently in more experimental state than training for industry and the service trades. This is true at both the school level and the universities. For example, the recent attempt to establish agricultural training in the fifth and sixth grades of the rural primary schools and to give vocational training in the first cycle of the agricultural secondary schools has been regarded by the Ministry of Education as unsuccessful.

The type of school-age agricultural education that appears most needed is a two-year course for boys of about 17 to 18 years who intend carees as working farmers, farm mechanics, farm managers, or other occupations requiring some degree of specialized training at the level of practical farming. At the Sahrestan or Bakhsh level, six-month courses for pupils with at least a fourth-grade general education should be organized for boys intending to be practical farmers without need for any specialized knowledge. These two agricultural vocational schools should be established in association with agricultural demonstration centers.

The present institutions for training university-level agricultural engineers and specialists need much strengthening and reorganization before they will be able to supply the country with the professional skills needed in this key sector of the economy. The country is pitifully short of research workers, demonstration personnel, and qualified teachers in almost all branches of agricultural science and agricultural economics. The present level and quality of attention now being given to this key sector of agricultural education does not seem adequate.

3. Three Special Programs

The Plan has partially financed the establishment of a special organization to develop audio-visual materials for use in the country's educational system. The Audio-Visual Institute is part of the Department of Fine Arts in the Ministry of Education and, by the end of the Plan period, the Institute should be well enough established so that its budget should become a responsibility of the Ministry.

The Ministry of Education has conducted a program of adult literacy classes in which army officers and primary school teachers have done the teaching. The army gendarmerie have also conducted literacy programs for their own personnel. The civilian adult literacy program has not been properly evaluated to judge whether or not this is a good use of education funds. We note only that similar programs in other countries have often proven ineffective.

Finally, manpower specialits in Plan Organization have taken the initiative in proposing an expended program of vocational training within the army. This proposal is appealing because of the excellent country-wide sample of the population which the army contains. In using the army for voactional training (including some related agricultural skills) the problem of how to push out training to the provinces and especially to villagers is "solved" by bringing the "students" to a central point. The strategy of training involved in this proposal is an excellent one; however, the proposal has so far been discouraged by certain military personnel on the ground that it would divert Iranian army personnel from more important tasks. We disagree with this judgment and believe it should be reconsidered. There is now apparently no hope for this idea unless it can be pushed energetically by influential people at the highest level.

SUMMARY

The Ministry of Education has shown much energy and initiative in its planning. However, the Ministry's programming has not shown enough awareness of the need for framing realistic targets based on a careful assessment of needs and resources. This means a more deliberate consideration of which programs (objectives) should take precendence over others in the country's educational system, and what the proper sequence of tasks is for carrying out these programs effectively. It is obvious that greater attention must be paid to the training of teachers, both for general education and for vocational schools. The breakdown in the initial approach to agricultural training should be followed through with a far-reaching review of the objectives in this field and the creation of new programs to carry them out. We have indicated above the general direction we believe agricultural education should take. We further recommend that agricultural training be made a responsibility of the Ministry of Agriculture instead of the Ministry of Education; this is the case in most countries that have developed effective systems of agricultural training.

Other matters that deserve early attention are (1) the modernization of the curricula for the general education system (including universtities); (2) a study of the adequacy of teachers' salaries; (3) a study of the physical condition of school buildings, many of which are believed to be in very poor condition; (4) a study of whether the present practice of renting property from private owners may not be so costly a method of providing schools that thought should be given to expanding the construction program -- this would only be possible if the additonal funds could be borrowed; and (5) study of the possibility that standard educational buildings could be designed to reduce future engineering and construction costs.

IV. MISCELLANEOUS PROGRAMS

A number of small and unrelated programs are also being supported by the Chapter's funds. These can be described very briefly.

A. LOW-COST HOUSING

A sum of 40 million rials has been given to the Mortgage Bank to support the building of four blocks of low-cost apartments at one site in Tehran. The houses have been completed; however, the houses remained unoccupied for a long time after their completion because no thought had been given to the criteria governing the selection of tenants. The project illustrates the difficulties to which a program can lead when it is not thought out properly in advance and when it is executed without any basic framework of housing policy. The Government is beginning to give more attention to housing problems. While a program of vigorous action is badly needed, it is extremely important that any action-program be preceded by at least a minimum of expert study. Without a little study there will be big mistakes. The Bureau favors an approach that would ask an experienced consultant to develop an action program that could be started within one year or less.

B. CONTRIBUTION TO THE DEPARTMENT OF PUBLIC STATISTICS

The contribution to this relatively new institution was made mainly to help finance of 1955 population census; a small additional contribution will be made in 1338-41 to help finance the processing and publication of census data.

C. CONSTRUCTION OF 12 HOTELS

An early intention to lend 200 million rials to the Pahlavi Foundation to build 12 hotels has been abandoned because of the shortage of funds. One of the 12 was built before Plan Organization's support had to be withdrawn.

D. COOPERATIVES AND SMALL-SCALE INDUSTRIES

Responsibility for developing cooperatives (including some pedal-loom textile cooperatives in four cities) has rested with the Agriculture Division, not Social Affairs, which has only contributed some of the financing. Progress in developing successful cooperatives has so far been disappointingly slow.

PART SIX

REGIONAL DEVELOPMENT PROGRAMS

(Chapter V of Plan Program)

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INTRODUCTION

Public and private development activities in Iran have tended, both before and after World Ward II, to concetrate on a few areas, prodiminently on the metropolitan center of Tehran. This has inevitably resulted in a similar concentration of other activities such as higher education, public services, and commercial distribution. The substantial natural trend toward increasing urbanization has worked in the same direction so that the rapid growth of the "center" now stands in sharp contrast to gradually increasing under-employment and lack of opportunities in some of the outlying regions of Iran.

Similar changes have occurred in the evolution of most economies, and their extent and timing have almost always created difficulties of an economic, social and political nature.

In recognition of this, the Iranian Government has authorized programs which are to deal with these regional disparities. This effort has taken many forms -- land distribution, community development "block" programs and the expansion of agriculture extension, municipal development programs and the attempted decentralization of public health and education activities. These programs aim at developing the latent agricultural and industrial resources of the peripheral areas, relieving the depressed economic condition of the people living there, and thus creating conditions leading to greater political unity and social progress.

But these efforts have not followed a pattern -- they have been piecemeal -- and have not attained a momentum which augurs well for the attainment of the broad objectives set. In the Second Seven Year Plan, the Plan Organization has inaugurated a "regional" approach to deal with these problems. This approach represents a different "strategy of development" which is examined in the following pages.

Two regional programs have been launched by the Plan Organization, one in Khuzistan and the other in Sistan-Baluchistan. In the following discussion the nature of their operations is described, and their advantages and current shortcomings analyzed. The general conclusion reached is that, on balance, this approach gives promise of making a positive contribution to development efforts. The shortcomings, to a considerable extent, arise from the rather misleading terms of reference under which the current programs are operating. This in turn may be the result of some confusion of what the regional approach should entail in so far as it applies to Iranian development problems.

Every national program of economic development has a "regional" aspect in the sense that particular projects are necessarily located in some region, and should be designed to fit into the needs as well as the special characteristics of the region. In this sense a "regional program" is but another way of describing a national program area-wise, and does not in tiself reflect a distinct approach. This is still true in those regions where a special configuration of resources such as a river basin or sizeable mineral deposits require a complex of investment and planning for the entire resource over time.

Furthermore, every national program must have an organization in the different provinces to carry out its program. For this purpose it is often necessary to strengthen regional operations through decentralization of authority and the introduction of additional technical support from outside the region. Such a policy decision often involves an administrative departure from the national approach, but not necessarily in terms of development planning.

However, where such regional organizations are established, it is possible to include in their terms of reference a considerable autonomy with respect to regional planning. Under such terms of reference priority decisions are made from the point of view of the region, without necessarily taking into account alternative uses of the same investment resources outside the region. But such an approach is in conflict with the attempt to establish a national planning process. Since the terms of reference given to the two existing programs have not been sufficiently explicit, there has been some cause for concern regarding this.

There remains the case of areas within a country which are both economically and socially far below the average, and where a political decision may be made to attempt to bring them closely to the average. This has been an important factor in setting up regional programs in Iran. Resources are allocated to such regional programs which would not necessarily be so allocated if the only consideration were the fastest increase of the income and welfare of the country as a whole. While such allocations are defensible on political and social grounds, it must be recognized that at the present stage of Iran s development, where average income and productivity of the whole country are so low and available resources in relation to general development requirements so scarce, regional programs in this sense must for a long time to come remain limited in scope if the country's best interests are to be properly served.

Both approaches outlined above, i.e. completely autonomous regional development planning and indiscriminate "welfare" allocation of financial resources, are inappropriate for Iran at the stage where the efficiency of investment is of overriding importance.

It is essential that "regional" programs be derived from a determination of national development goals and targets, based upon an evaluation of the existing and potential resources of all areas. The particular regional "package" shoud be delineated in the course of allocating financial resources to projects and programs which are accorded priority in conformance with the national plan. Thereafter, special administrative and investment undertakings designed to maximize the efficiency and consistency of the investments in the particular areas are desirable and necessary.

The two currently operating "regional programs" in Khuzistan and in Sistan-Baluchistan reflect the problems of regional planning analyzed thus far. In both cases an extensive organization of administrators and technicians, foreign and Iranian, has been rapidly built up designed to serve as an instrument both for planning, executing and supervising development projects in the areas of their responsibility. And in both cases the need has been urged upon these organizations to implement some projects rapidly for the political as well as economic impact expected.

The difficulty with both programs has been that their terms of reference have not been made sufficiently clear with respect to the different functions they are expected to fulfill. In consequence, there has been insufficient guidance from the Plan Organization with respect to resource level allocations and planning targets. On another level, there has been insufficient insistence on the part of Plan Organization in stressing the need for integrating their plans and operations with those of other government agencies operating in the region.

Nevertheless these programs are demonstrating a multi-purpose technique which, when incorporated into a national planning complex, will be a valuable tool in fostering a faster rate of economic and social development.

I. THE PRESENT REGIONAL DEVELOPMENT PROGRAM: A Description

Currently there are two regional development programs, in Khuzistan and Sistan-Baluchistan. Another has been started in Kerman, but had to be ended early in 1338 after the first phase because of the shortage of funds. Additional regional programs have been proposed for Azerbaijan, Southern Khorrasan, and Kurdistan.

In the case of Khuzistan, the regional program has reached an advanced stage. By the end of 1337 Plan Organization had spent approximately $37.0 million (including the Karkheh project), and will require an estimated total of over $110 million for the remaining period of the Second Plan. (See Statistical Appendix).

The Sistan-Baluchistan program has reached the second phase of execution and is presently embarking upon a series of projects currently estimated to cost about $7.5 million in the remaining Plan period. (See Statistical Appendix).

The Kerman program was closed after completion of the first phase and submission of the preliminary reports and recommendations.

Proposals for regional development programs in Azerbaijan and Southern Khorrasan have been indefinitely deferred due to shortage of funds.

In all such programs, a firm of consultants has been employed to carry out the surveys, recommend the projects, and supervise the activities undertaken in the assigned regions. For legal reasons, in each case an Iranian agency -- e.g. the Khuzistan Development Service and the Southeastern Development Service -- has been established as an agency of Plan Organization in the region. It is through the organization that the consulting firm operates. As projects are adopted, contracts are let to other firms or agencies, or are undertaken directly by the Development Service as an agent of the Plan Organization. All such activities are reviewed and approved by the top management of the Plan Organization and its High Council, but administratively these activities do not fall under the supervision of the executive divisions.

The work carried out by the consulting firms in the several regions has usually involved the following elements.

First Phase:

1. A review of all relevant studies and data concerning the region;
2. Selective field investigations leading to a comprehensive view of the problems and potentials of the region. Typically, these surveys would cover:
   a. The status of agricultural development;
   b. The development of basic transport and communication facilities;
   c. Social problems, including health conditions and educational facilities;

   d. Geological and mineral reconnaissance; and
   e. A review of industrial development, including an assessment of future possibilities meriting further exploration.

3. The above, in turn, have led to recommendations for more detailed studies to test the desirability of projects suggested by the general surveys:

Second Phase:

After arrangements have been made regarding timing and cost of the detailed studies:

1. A complete report is rendered for each activity, including a general description of the project, an estimate of cost, and recommendations for implementation.

2. A comprehensive report on the proposed development plan for the region, including:

   a. Priority ranking of projects;
   b. Suggested means of financing;
   c. Suggested organization for execution of the program; and
   d. A description and cost estimate of the personnel requirements.

Third Phase:

After adoption of the program, contracts are signed to execute the work; normally the Regional Development Service acts as agent to supervise or execute the work on behalf of Plan Organization.

Additionally, the terms of the contracts covering the above activities require the consulting firm to:

a. Assist other agencies in the region, public and private;
b. Relate its proposals and activities to other undertakings in the region;
c. Propose activities which might be undertaken in the region by international agencies and assist them in coordinating their activities with appropriate government and private agencies;
d. Assist in establishing apprpriate agencies and institutions which will train and generally improve skills necessary to bring about advances in agriculture, industry and public administration;
e. Assist and encourage other agencies -- national, regional, and local -- and to enlist their leadership in the formulation and execution of a reginal plan.

II. THE REGIONAL APPRAOCH AND THE "DEPRESSED" AREAS

The above approach and requirements as applied to backward areas appear logical and conceptually sound, given the current state of knowledge about these regions and the present lack of a unified approach to their development.

Characteristically, there have not previously been studies of these regions to catalogue systematically their resources, their social and economic structures, their population problems, and their relationship to other areas as either markets or sources of supply. There has been little exploration of the factors working for or against social change and economic growth.

There is also justification for approaching development of these areas on a regional basis. Because of geography, history, and custom, several of the political subdivisions coincide with economic units which can be dealt with on a homogeneous or regional basis.

Finally, there is justification in assuming that the initiative for development effort must arise from forces outside the region. The indigenous skills entrepreneurship and administrative abilities of the local inhabitants are at a generally primitive level, and certainly not capable of self-generated and self-directed development efforts. These poor, remote, and neglected areas are typically in a "pre-development" stage. That is, they have not achieved a level of economic activity which will generate adequate indigenous savings for investment, their societies have not reached a level of social development and self-government to serve their communal needs and interests, and they do not have the physical resources and skills to attract or generate self-sustained or self-liquidating innovations. In some areas the economic situation is even said to be one of regression rather than stagnation, of constantly threatening starvation rather than mere subsistance existence.

These regions do, however, have a legitimate claim on the resources, skills, and services of Iran from the political, economic, and social point of view.

There are, of course, obvious political problems which the regional development programs are designed to affect, explicitly or implicitly. In the border areas of Pakistan, there is the very real economic (and therefore political) attachment of many of the inhabitants to Pakistan — partly influenced by more adequate transportation links with adjacent areas than with the economic heartland of Iran. In parts of Khuzistan, much of the population is of Arab origin and not fully assimilated into the Iranian community. In the northwest there are ethnic and language differences. Many of the inhabitants in the depressed areas are tribal and migratory. There is an increasing depopulation of areas on the Iranian periphery occasioned by forced migration brought about by water failure, land erosion and salinization, and the lack of economic opportunities which has overcome attachment to ancestral locations.

Moreover many of these regions have few communication links with Iran proper, and communication which does exist is usually in one direction rather than a two-way flow.

Finally, there is the overriding argument of Iran's general national aspirations for a better way of life. The desire to increase the general standard of living and a better distribution of income cannot endlessly contemplate a development of the "center" with utter disregard for the large populations eking out an often precarious and sordid existence on the "periphery". The oil income which makes possible Iran's ambitious development program is a national heritage that deserves to be shared as equitably as possible. In the face of political and moral realities, it is clear that these regions should not be denied special attention solely because the marginal utility of capital investment will be significantly less when devoted to development activities in the "pre-development" areas of the country rather than in other areas where investment will have more immediate or greater effects on national income.

Development programs involve allocation of some funds on grounds which are essentially social and political; the economic return on these funds is often lower than if they were spent on other projects or other areas. It might be argued that the Government ought to spend heavily in the poorest regions because they need help the most; but any such policy would require such large expenditures of development funds in areas of low return, and the attractive, high-yield opportunities could not be exploited. Economically, the regional allocations should not be larger than necessary to alleviate the worst conditions and open up minimum opportunities to be developed by local initiative and investment.

Accordingly, the above factors lead to an affirmation of three elements of the regional development approach so far carried out.

First, that an approach to development along regional lines for areas in the "pre-development" stage is logical and desirable. The regional approach of Plan Organization, in so far as it recognizes and deals with the above circumstances, is much to be commended.

Second, that some development activities in these areas, in spite of "better opportunities" elsewhere, are necessary and therefore deserve stress in the overall development effort.

And third, that the stage of development of these depressed regions requires special efforts from the "outside" to initiate social and economic change. It does not follow, however, that a regional approach as applied to "depressed area" problems is anything more than an administrative mechanism for achieving general "welfare" goals. The goals themselves must be established in the process of national planning under the overall restraints established by the availability of financial resources and alternative investment opportunities and requirements.

III. THE REGIONAL APPROACH AND THE MORE "ADVANCED" AREAS

There are, of course, other geographic and political regions of Iran where living standards are higher, where there exist greater physical resources and where education, social organization and general entrepreneurial resources are more developed. These regions have not suffered from public or private neglect. Azerbaijan, the Caspian coast, Kermanshah, and Fars are typical of this category.

Although in these regions the aggravating circumstances of the depressed areas do not present themselves across the board, a regional approach might contribute to their accelerated growth. For it is possible that these regions would develop faster if their problems were attacked on the basis of an integrated approach rather than in the uncoordinated and often unbalanced manner heretofore followed.

In this respect they have much in common with the depressed areas:

1. They have not (with the exception of Khuzistan) been extensively surveyed from the viewpoint of aggregative resources or problems and opportunities of integrated development;

2. They have not been developed by a consistent pattern of investment whereby contributory and ancillary institutions and services have been created to maximize returns from investment activity or to anticipate future needs; and

3. There has been no real attempt to establish priorities in development activities which would mobilize the existing physical and human resources on a more rational basis.

Therefore, for somewhat different reasons, the planning, programming, and execution of integrated regional programs for the more advanced regions appear to present an opportunity to achieve a better decentralization of development activity and a means of creating greater impact from those activities being carried out. But in such areas, a regional program becomes primarily a tool of administrative convenience, subject to the restraints and requirements of overall development planning.

IV. EXISTING REGIONAL DEVELOPMENT PROGRAMS

The two current regional programs illustrate the diffirent aspects of regional planning.

A. THE KHUZISTAN PROGRAM

The Khuzistan program is part of a long-range program for the development of the Khuzistan area, having the principal objective of providing an irrigation and power base for eventual intensive agricultural and related industrial development.

The program consists of a high dam (the Dez) power facilities ranging from an initial 130,000 k.w. to an eventual 510,000 k.w. capacity, a high-tension transmission line connecting Abadan and Ahwaz, irrigational facilities which will eventually permit summer and winter irrigation approximately 130,000 hectares, a (pilot) sugar cane plantation and sugar mill. A polyvynilchloride plastics plant was part of the original plan, but has been postponed beyond 1341 for lack of funds. Associated with these projects are the administrative and managerial problems of setting up a water and power authority, introducing new crops and new techniques of agriculture, improving local transportation and communication networks, and a major training effort. And although the approach to irrigation has been revised during the period 1338 to 1341 to include a pilot project of 20,000 hectares, the program still represents an investment which will cost over $100 million during the Plan period, and which will require another $70-80 million between 1342-52.

This is an overall plan for the region, encompassing an intensive or large-scale exploitation of the major resources, a large expenditure (on a per capita, per hectare, or any other comparative basis), and a comprehensive approach (whereby advances on almost every front will require similar achievement in many other key sectors, e.g. technology, infrastructure, education, social welfare, private enterprise and government).

B. SISTAN-BALUCHISTAN PROGRAM

The regional development program in Sistan-Baluchistan reflects certain regional differences such as resources and ethnical background of the people. This is an overall plan for the region encompassing selective exploitation of resources (limited by the lesser potential for massive development projects), a relatively small expenditure, and an approach through gradual progress on different fronts, concentrated mainly on developing certain key activities of a "prerequisite" nature, and relying mainly on the results of these activities to indicate the next stage of development.

The preliminary program in Sistan-Baluchistan thus consists of a series of survey activities largely related to agriculture, the carrying-out of various small-scale irrigation and reclamation projects, river wall and flood control structures, but most important, a series of Agricultural Service Centers, demonstration areas, key secondary roads, and some modest small industries to process agricultural raw materials. The initial phase of this work is to cost approximately $10-12 million up to the end of the present Plan period.

Both programs call for surveys and studies to develop the pattern of development which might be most suitable in either case. From this point, the findings relating to resources and social and economic structure would call for different judgments. In the one case, Khuzistan, these have led to a scheme calling for massive physical structures (Dez Dam, irrigation networks, sugar can plantation and sugar refinery, etc.) and a very rapid and fully integrated change of the whole structure of the economy of the region. In Sistan-Baluchistan it has called for a diverse approach along the lines of conservation, infrastructure, and institutional development largely in agriculture -- paced to the results and progress achieved. It might be characterized as an experimental approach which can readily be adjusted to achievement or lack of progress. Khuzistan may be said to constitute a massive commitment which would require "right" answers over a broad front from the start, with little flexibility should any major factors fall badly out of line with the pattern or timetable set.

For Khuzistan, because of the large commitment of financial resources, a second question comes into play which does not become nearly as significant, because of the relatively small expenditures contemplated, in Sistan-Baluchistan. This is the question of priority of allocation of development resources.

Whereas for programs of a selective and modest nature in the Sistan-Baluchistan region it would be adequate to develop criteria and priorities with primary regard to the region itself (within a larger judgment as to how much to allocate to the region) based largely on a "welfare" consideration, Khuzistan represents such a sizeable allocation of total development resources, and the program contains such major projects that, other political and social considerations being equal, it would have to be weighed against similar integrated programs which might be contemplated for other regions.

Therefore, the kind of development to be undertaken in the several regions is not alone something that flows naturally from the different circumstances encountered, but from consideration of overall goals, alternative scope and methods and timing -- and most important -- from the most logical and desirable pattern of overall investment for the country. It does not follow that, even if the pattern of development of Khuzistan is the most logical from the viewpoint of the abundance or scarcity of given resources in that particular region, returns from investment in Khzistan will measure up to returns which may be achieved elsewhere at similar cost or within the same number of years.

Of course, if there were an intensive development of Sistan-Baluchistan, it should not proceed with total disregard for the comparative results which might be obtained if the same money, time, and effort were to be experience alsewhere in Iran. But the scale of the financial outlays currently involved makes it much more possible to assess the priority of investment in this area on the basis of the minimum required to achieve "welfare" objectives rather than "output" objectives. The future planning problem for Sistan-Baluchistan will be the extent to which welfare element of the program will be permitted to expand, especially if the surveys of the region do not reveal major development opportunities which might have priority in a future national plan.

Therefore, answers to the questions of what type, size, and targets of regional development are largely to be found within the context of national resources availabilities, alternatives, possible uses of these resources, and national development goals. Different goals will dictate different approaches to the development programs to be launched within different areas. In view of these relationships, national goals and policies should be explicit in order that a consistent pattern of development can be determined. An isolated approach to regional development can confuse and distort a national effort to achieve a rate of development and a consistent pattern of economic and social growth. Unfortunately the latter is largely what has been happening.

V. PROBLEMS OF THE PRESENTS REGIONAL PROGRAMS

The regional programs have proceeded largely from the initiative of the Plan Organization, based upon separate proposals for development of the different regions and without much relation to the place of these programs in the national development effort. At the same time the operations of other government agencies in the effort. Too often there has been no expansion of normal government operations to support the development program. Examples of this are the allocation of almost 20% of the investment resources of the Plan Organization in Khuzistan while other agencies, such as the Ministries of Agriculture, Education, Health, Communications and the Agricultural Credit Bank and others are allocating less than 1% or 2% of their resources and services to that region.

In other areas, activities of a completitive nature are being undertaken without any coordination and at the very least are not being developed to complement each other. The fertilizer plant proposals for Shiraz and Ahwaz are glaring examples of this. In some cases, activities are under way in Plan Organization regional programs which are more appropriately the work of other government agencies.

An additional activity is that even within the Plan Organization there is little knowledge or coordination between regional programs and the investment and operating activities of other executive divisions.

These and several other organizational weaknesses of the current regional approach could presumably to remedied without upsetting the current programs unduly. However, there are much more fundamental problems raised by current methods of attempting to bring about regional development.

A paramound problem arises from the fact that the various regional approaches are largely isolated activities undertaken outside the framework of national planning and are credited out without much support from or coordination with other agencies of the Government, national or local.

Furthermore much of regional work is apparently going forward with minimum local participation and in some instances without significant Iranian participation. While this is partially true of all Plan Organization activities, it is more true of the regional approach.

These aspects of the situation have several dangers for the future. Substantial physical investment in capital structures given rise to many claims on the future financial resources and services of the Government. To create this demand without making financial or administrative provision for meeting it can only lead to serious problems in the future. To attempt to increase agricultural output with new techniques without providing for substantial agricultural credit is an impossibility. To create additional agricultural output without providing for roads to carry this to markets is shortsighted. To build the roads without adequate provision for their maintenance and upkeep is foolhardy. To accelerate industrial enterprise in an area without planning to meet the needs for skilled manpower and for schools to provide a stream of trained or literate future workers places a burden on current activities and leads to possible bottlenecks at a later stage of development.

Many of these activities cannot be undertaken by temporary measures and temporary agencies. Nor can they generally be promoted or induced or even fully anticipated unless there is complete understanding of the plans and their direct and indirect costs as well as their benefits. Furthermore, these resources and services cannot be commanded and provided on an ad hoc basis; demands in one region must be weighed against others elsewhere.

These are some of the reasons why regional development must be planned within a pattern of national priorities, and why the activities of regular government agencies in a region should be planned within the general context and timetable that govern the development program.

These ancillary activities, moreover, do not spring fullblown when the need arises. They require organizations, institutions and skills which are often hardest to achieve or obtain in isolated areas, far from the home offices in Tehran. Moreover, the peripheral areas do not have the political representation and powers of persuasion to assert their claims effectively in the capital. In the absence of these normal means of asserting their needs and legitimate demands, other methods of achieving this claim to prioritiy must be found. Regional "programs" can play a major role in performing this function.

Such programs can help established government agencies incorporate the needs of the regions in their regular planning budgets. Indeed, regional plans should not go forward without assurance that this is the case. Under ordinary circumstances, this is best assured when the agencies have a part in formulating and approving these plans and therefore have a stake in their success. Active participation is a more certain way to cooperation than passive acquiescence or outside pressure. This comment applies equally at the national and local levels.

The current regional approach has not yet fully come to grips with these problems. This was not because these facts were unknown at the time the programs were launched, but because there was little or no planning to weigh allocations of resources; there was little or no tradition of coordination between government agencies at either the national or local level, and the demands for speed were so pressing as to permit no adequate development of institutions and people to bring about greater Iranian participation in the programs.

What follows, then, is not to be considered an exercise in fixing blame for what has occurred, much of which was unvoidable, but to point up problems that need attention in the future, and to suggest some lines of approach.

A. REVIEW, EVALUATION, AND COORDINATION OF REGIONAL DEVELOPMENT ACTIVITIES

As pointed out earlier, it is essential that the program for development of a region be considered from the point of view of how the program will contribute to national development objectives. There must be some undertstanding of this to permit rational allocation of total investment resources to the region, and even to assist in determining priorities within the regional program itself.

For major programs, such as Khuzistan, this would consist of evaluation from the following points of view: First, the relative merits of the projects and programs as part of a national plan to achieve overall goals; second, the relative merits of the regional program as contrasted with other similar regional programs in the national program; and third, the appripriateness and value of the various projects in the programs to the integrated development of the region itself. These evaluations in turn must be madb within a realistic estimate of total financial resources available for government investment throughout the country.

For the smaller-scale and more dispensed projects of the "welfare" types of regional programs, greatest weight should probably be placed upon the economic and social benefits of the projects to the region. This would call for paying greater attention to the indirect benefits in appraising the relative worth of the various investments. No hard and fast rule can be applied, but certain minimum standards should be set and emphasis given to projects which would contribute significantly toward developing the means for long-term and ultimately self-sustained growth.

None pf the projects in the regional progress have been adequately measured by systematical applications of national planning criteria other than perhaps the test of regional consistency. This lapse is partly explainable by the lack of overall planning criteria at the time of initiation of the programs, but a good deal more analysis could have been carried out had the planning of these programs been coordinated within the Plan Organization. The fact that these were never reviewed by the other operating divisions of the Plan Organization is symptomatic of this lack of coordination. And these programs and projects received no scrutiny whatsoever by the other ministries of the Government - in many cases even when it was proposed or assumed that these other agencies would be called upon to play a role in one or another phase of the development of the region.

Clearly, therefore, it is necessary that:

1. Regional programs and all of the projects which make them up should be evaluated from the viewpoint of national planning objective and policies -- and they should, when adopted, become part of the national development plan.

2. These evaluations should be made not only by the Development Service concerned, but also by relevant sections of the Plan Organization and the ministries.

These evaluations will have two other benefits which are of extreme importance to the overall development program: (1) participation in the planning and execution of regional development programs by the executive division of the Plan Organization will bring about better coordination of Plan Organization activities; (2) similar but less extensive participation by other government agencies will induce closer cooperation of Plan Organization and ministry activities both in Tehran and in the region. Such participation in planning should stimulate an awareness on the part of other agencies of the role they can play in the development of regions.

While it is true that these additonal activities may lead to delay, in the long run it may be possible to evolve regional program which will represent a fully coordinated effort of the central government, have across-the-board support, and result in joint efforts which will improve the economic and social returns from investments in the regions.

B. SUPERVISION AND EXECUTION

A second major area for improvement of the regional approach lies in the present organization. Two problems stand out.

First, the regional programs are devised and directed by consulting firms which act as executive agents of the Plan Organization. They are autonomous bodies which, after general approval by the Managing Director of the Plan Organization, are able to negotiate and let contracts, negotiate with other agencies and private individuals, and directly supervise the work of contractors and (in Khuzistan) various regional water and power authorities.

Second, other than liaison officers in the Plan Organization and some administrative and technical staff members, the Development Services do not utilize the services of Iranian nationals in an executive capacity. Nor are any officials of the Plan Organization directing any of the phases of the work undertaken by these Services.

Up to now both of these circumstances have probably benefited these programs in terms of efficiency of operation. Autonomous bodies are able to acto more decisively and quickly and can apply criteria and standards of performance which far exceed those which can be applied by a general staff operation which must run all the bureaucratic hurdles of a large government organization.

But autonomy also has its costs. The principal cost is the lack of coordination which was referred to earlier. Another is the almost complete non-Iranian direction and participation; this has two main effects.

First, there is the loss of the experience which might be gained by Iranians through active participation at all levels of the regional programs. People experienced in the day-to-day processes of planning, supervision,and execution are one of the greatest shortages in Iran today. The regional programs present an almost unique opportunity for Iranians to gain that experience.

Second, the experience built up in these programs is not retained in Iran, but will inevitably leave Iran when the foreign experts and administrators leave.

Both of these problems were avoidable to a degree in the past without sacrificing many of the benefits which came from the original organization. It would be highly desirable to try to remedy these defects in the future. Such an effort can be made without unduly disrupting the present programs.

It is suggested that the following actions be taken:

1. Within the Plan Organization there should be established a Regional Development Division, headed by an Iranian, with sections for each region. This division should have the responsibility of planning, coordinating, and supervising the regional development programs. This new Division should probably have an advisory staff of selected foreign advisors to augment the experience and expert knowledge of the Iranian staff in the initial stage.
2. The Regional Development Services should be integrated into a new organization (a Regional Authority) under Iranian leadership, which would also have representation of other national and local agencies, and under whose direction and control the regional program would be implemented.
3. A policy and plan should be established within the Regional Development Services, whereby Iranians would gradually be integrated into and trained to take over various executive and staff functions of the Development Services.

The above changes, of course, could not be accomplished overnight; qualified people are hard to find, it is difficult to induce them to work and reside in the regions, and work might be slowed up in deference to the training function and the greater uncertainties which inevitably arise from a "mixed" operation. But the necessity and desirability of making a substantial move in this direction are already demonstrated, not only in the regional programs, but throughout the Iranian Government where similar situations occur.

C. SPECIAL PROBLEMS OF EXECUTION

1. Surveys

Related with the above is the question of coordinating some of the survey activities in the regions which are carried out as part of the program. Examples are the preliminary surveys undertaken in the various regions regarding geology, hydrographies, and various phases of agriculture reasearch.

In almost every case, experts have been brought in from abroad to do regional geological, hydrographic, cartographic, and agricultural surveys. The accumulate data (and experience), render a report, and then depart for other work in other countries. These reports, in turn, have received but limited distribution and the working papers underlying the reports are often not retained in a form which could be utilized by outside groups.

Accordingly, for the broad surveys in these regions, it would be much more economical and beneficial to Iran if a central geological survey and mineral research organization,[1] a central hydrographic and cartographic institute, and other embryonic government (or even private) service agencies could be utilised for a great deal of this work. In some of these fields (e.g. cartography) a beginning has already been made. The Iranian staff of such organizations could be used in regional surveys, being augmented as necessary by the technicians of the Development Service and various international agencies.

Such arrangements would serve a twofold purpose: It would assure that all the knowledge obtained in the course of surveys would be retained in the working files of permanent Iranian institutions; and it would assure a mechanism whereby Iranian could be better trained and developed to render these services in the future.

This process, of course, whould be gradual, and would only grow as the capabilities of these institutions were increased. But a bias toward utilizing their services wherever possible would accelerate this process and pay great dividends to Iran in the future.

Coordination of surveys with other agencies is also vital. This cuts across the board with regard to roads, ports, the development of industries, and the agricultural and community development programs. This will be discussed further below. (See Coordination).

A major substantive gap in the surveys of almost all regions is the exploration of the possibilities of small industries to assist in the development of these regions. The growth of rural and small town industry plays a very important role in industrial decentralization. Most surveys have concerned themselves only with the exploration of possibilities for commercial feasible industrial plants, without mention of the possibilities of any small industries program.

2. Project Proposals

Earlier in this paper the necessity of priority analysis of projects was pointed out. This especially applied to the major projects which are part of a regional program.

Project proposals, however, have been deficient in two respects. First, for many projects no careful cost-benefit studies have been made prior to their initiation. These are the so-called "obvious" projects referred to earlier -- where haste to "get something started" for political or other reasons has been the prime consideration.

Second, there have been genrally inadequate appraisals of the continuing costs and maintenance requirements of projects, and of the ancillary activities and additional social overheads necessary to support these activities.

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[1] The UN proposal for geological and mineral surveys (TAA/IRA44, 10 November 1958) is an excellent example.

The project investments in these areas create a need for additional gorvernment services; satisfying these is bound to increase national and local government budgets. There must be forward planning on the part of other government agencies for this future burden. It cannot be assumed that these extensions of government services will occur without special and exceptional effort. Consulting firms cannot achieve such agreements with the other agencies of government. Such agreements will be even more difficult to obtain unless the ministries and other agencies are active participants in the planning and execution of the regional programs.

3. Coordination

The above analysis leads to the affirmation of previous recommendations, i.e. the regional plans must become part of the overall national plans; that top-level organization of the program should include some provisions for the coordination of activities with other national and local agencies operating in the area.

It is fairly clear that execution of grograms and projects in regions can best be done if there is coordination at the regional level, and if the operations carried out there can be on an autonomous basis within the limits of the program approved at the national level.

Effective coordination would appear possible if some inter-ministerial group were created for each region (or for regional programs as a whole) which would review and approve the program(s) for the region(s), and which would be able to commit the various agencies to undertake activities in support of the regional development program. Below this, it would appear necessary that there be established in each region an executive unit which would have authority to carry out the approved program. Representatives of other participating agencies would be assigned to this regional Authority. This Authority would not be required to submit every decision back to the central agencies, but within approved programs and projects would be empowered to undertake work and spend funds -- much as the present Development Services do.

VI. CONCLUSIONS AND RECOMMENDATIONS

1. The "regional development approach", if used for administrative convenience to bring effective and expert teamwork to certain "backward" areas for the purpose of developing general welfare programs, can be a useful tool of economic development.

2. The same approach can be used for other areas to prepare and execute development programs.

3. But in either case, care should be taken that regional development is not interpreted to mean regional autonomy. The priority of regional development program can only be properly judged within the context of a national plan which relates the regional program to national goals.

4. The current regional programs of the Plan Organization provide a basis for establishing this regional approach, but they suffer from three major defects:

   a. Lack of coordination of planning, execution and operation with other elements of the Plan Organization and with other goverment agencies;

   b. Lack of sufficient participation by Iranian nationals and Iranian agencies in all phases of regional development activity; and

   c. Redundency of effort occasioned by having separate groups with separate approaches undertaking autonomous operations in the several regions.

5. These defects would gradually be corrected by:

   a. Establishing an appropriate inter-ministerial body which will review and approave regional program on an integrated basis;

   b. Establishing a Regional Development Division in the Plan Organization which would deal with the above group, plan and coordinate region programs, and evaluate and supervise execution;

   c. Establish in each region a Regional Authority (with the participation of other agencies) charged with execution of the approaved programs; and

   d. Developing a program whereby Iranians would gradually be integrated into and trained to take over various administrative and executive regional development agencies.

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Annex I-1

In Billions of Rials

SUMMARY OF REVISED SECOND SEVEN YEAR PLAN

(Mehr 1334 through Shahrivar 1341)

Half-way point: end of 1337

Line	TITLE	Disbursed First Half	Estimated Disbursements Second Half	Estimated Total Disbursements 7 Years	o/o
1	Chapter I: Agriculture and Irrigation	7.798	11.060	18.857	22
2	Chapter II: Communication and Telecommunication	11.979	18.429	30.408	35
3	Chapter III: Industry and Mines	4.775	1.969	6.744	8
4	Chapter IV: Social Affairs	4.528	7.140	11.668	13
5	Chapter V: Regional Development	3.315	8.878	12.192	14
6	New Programs	-	1.000	1.000)	1
				)	
7	Not Yet Classified Disbursement	.193	-	.193)	
8	Non-Program Disbursement	1.588	4.500	6.088	7
	(Including Administrative Expenditures and Loan Interest).				
	TOTAL:	34.176	52.976	87.150	100 o/o

Annex I-2
In Millions of Rials

SUMMARY CHAPTER I.

Agriculture and Irrigation: Revised Program

Chapter (1)	TITLE (2)	Disbursed First Half (3)	Estimated Disbursements Second Half (4)	Estimated Total Disbursements 7 Years (5)	o/o
1	Survey of Irrigation and Dam Construction	443	528	971	5
2	Agricultural and Irrigation Training	174	182	357	2
3	Farming and Crop Improvement	161	200	361	2
4	Animal Husbandry	131	380	511	3
5	Plant Pest Control	444	369	813	4
6	Forestry and Pastures	180	100	280	1
7	Development of Villages and Barren Lands	157	559	716	4
8	Agricultural Extension	109	179	285	1
9	Agricultural Machineries	672	410	1,082	6
10	Meteorology	34	15	49	*
11	Rural Economy and Agricultural Engineering	62	52	113	1
12	Silos	62	140	202	1
13	Agricultural Industry	149	-	149	1
14	Irrigation and Dam Construction	4,557	7,680	12,237	65
15	Loans for Quanats and Deep Wells	352	-	352	2
B	Credits	112	269	381	2
	TOTAL CHAPTER I.	7,799	11,063	18,859	100

* Under 0.5 per cent. Others rounded to nearest per cent.

Annex I-3
In Millions of Rials

SUMMARY CHAPTER II

Communication and Tele-communication: Revised Program

Sub-Chapter	TITLE	Disbursed First Half	Estimated Disbursements Second Half	Estimated Total Disbursements 7 Years	o/o
1	Roads	4,182	14,290	18,472	61
2	Railroad	4,685	672	5,357	18
3	Airports	812	1,282	2,094	7
4	Ports	1,436	1,422	2,858	9
5	Tele-communication	598	528	1,126	4
6	Cartography	266	235	501	1
	TOTAL CHAPTER II	11,979	18,429	30,408	100

Annex I-4
In Millions of Rials

SUMMARY CHAPTER III

Industry and Mines: Revised Program

Sub-Chapter (1)	TITLE (2)	Disbursed First Half (3)	Estimated Disbursements Second Half (4)	Estimated Total Disbursements 7 Years (5)	o/o
1	Completion of State Owned Factories and Mines	131	39	170	3
2	Textile	1,585	1,199	2,783	41
3	Sugar Industry	495	40	535	8
4	Cement Industry	1,311	389	1,701	25
5	Mines	91	67	158	2
6	Copper Foundry	-	-	-	0
7	Steel Foundry	288	120	408	6
8	Fire Proof Material Industry	-	-	2	*
9	Fisheries	39	46	85	1
10	Laboratories	1.7	1	2.7	*
11	Vocational Centers	20	7	28	1
12	Industrial Cities	24	10	34	*
13	Industrial Credits	723	-	723	11
B	Chemical Industry	67	48	115	2
	TOTAL CHAPTER III	4,775.7	1,966	6,744.7	100

* Under 0.5 per cent, Others rounded to nearest per cent.

Annex I-5
In Millions of Rials

SUMMARY CHAPTER IV

Social Affairs: Revised Program

Sub-Chapter (1)	T I T L E (2)	Disbursed First Half (3)	Estimated Disbursements Second Half (4)	Estimated Total Disbursements 7 Years (5)	o/o
1	Public Health	1,173	1,533	2,707	23
2	Education	1,185	628	1,812	15
3,5	Electric Power for Provinces and Social Development in Provinces	1,991	4,888	6,879	59
4	Hydroelectric Gas and Steam Power Centers	3	-	3	*
6	Statistics and Census	118	51	169	1
7	Contribution to Cooperatives and Rural Funds	57	24	81	1
8	Contribution to Labor Organizations	1.2	16	17	*
	TOTAL CHAPTER IV	4,528.2	7,140	11,668	99

* under 0.5 per cent. Others rounded to nearest per cent.

Annex I-6
In Millions of Rials

SUMMARY CHAPTER V

Regional Development: Revised Program

Sub-Chapter (1)	Project Title (2)	Disbursed First Half (3)	Estimated Disbursements Second Half (4)	Estimated Total Disbursements 7 Years (5)	o/o
1	Khouzestan Development	3,081	8,313	11,394	94
2.	Sistan and Baluchestan Development	187	565	752	6
3	Kerman Development	46	-	46	*
	TOTAL Regional Development	3,314	8,878	12,192	100

* Under 0.5 per cent. Other rounded to nearest per cent.

Annex II

DISTRIBUTION OF THE OIL REVENUE AND PLAN ORGANIZATION'S SCHEDULE OF EXPENDITURE
(million dollars)

Oil Revenue		Govt. and NIOC	Distribution under the Second Seven Year Development Plan Act d/			P.O. d/	P.O.'s Expenditures under the Act a/	Actual and Projected Receipt by P.O. f/
			NIOC's	Govt.	Govt.'s extra share (a)			
1334 a/	48.6	25.1	....	....	....	23.5	31.1	23.5
1335	167.3	55.0	15.0	16.7	23.3	112.3	123.6	72.6
1336	224.9	108.3	48.0	22.5	36.9	116.6	199.2	100.3
1337	247.2	151.3 *	67.4	24.7	59.2	95.9	184.1	103.6
1338 b/	257.0	51.0				206.0	142.4	125.0
1339	280.0	56.0				224.0	105.7	145.0
1340	302.0	60.0				242.0	88.6	161.0
1341 c/	163.0	33.0				130.0	40.3	129.00
Total	1,690.0	539.7				1,150.3	915.0	860.0

a/ Second half b/ Projected c/ First half

d/ Article 8 of the Second Seven Year Law States:

"For the years 1334, 1335 and 1336:

1) The NIOC will place at the disposal of the Ministry of Finance any surplus remaining from the stated payment after having covered the authorized expenditures foreseen in that Company's charter.
2) The Ministry of Finance will utilize the surplus in question plus 10o/o of the total Oil Income..
3) The balance of the total Oil Income (including tax and stated payment) shall be paid to the Plan Organization for Plan Operations.

e/ Article 3 of the Second Seven Year Development Plan Act lays down the schedule of expenditure year by year for "programs elements of which are established". These programs total 49.3 billion rials. For the purpose of this column the remaining 20.7 billion rials are evenly distributed.

f/ Up to 1337 the figures are actually receipts. 1338 figure is budget allocation net of B.P. compensation. The share of Plan Organization 1339 - 41 is calculated on the basis of 55 o/ appropriation.

* In ensuing years until the end of the term of the Plan 80 o/o of the total Oil Income .... shall be paid to the Plan Organization.

(a) Note 2: In case that the total revenue from oil should exceed $144 million in the year 1335 and $188 million in each of the years 1336 and 1337 the surplus shall be placed at the disposal of the Ministry of Finance.

Expenditures of Government Ministries 1335 - 1338

(Billion Rials)

		1335		1336 Actual		1337 V.E.*		1338 V.E.*	
		Amount	o/o	Amount	o/o	Amount	o/o	Amount	o/o
Major Purpose:									
1	Defense	7.9	39.9	8.1	38.7	11.4	39.3	11.9	38.1
2	Education	3.9	19.7	4.6	19.8	5.2	17.9	5.7	18.3
3	Health and Welfare	1.0	5.0	1.0	6.0	1.9	6.6	2.0	6.4
4	Roads and Communication	1.4	7.1	1.2	9.7	2.3	7.9	2.5	8.0
5	Administrative and Other Expenditures	5.6	28.3	5.9	25.8	8.2	28.3	9.1	29.2
	Total	19.8	100.0	20.8	100.0	29.0	100.0	31.2	100.0

* V.E. means "Voted Estimates"

Note: Expenditures have been arranged by major purpose and not by individual ministries. Expenditures shown on the latter basis would come to the same total.

Comparison of the Old and the New Cost of Living Index of Bank Melli, Mehr 1337 to Khordad 1338

(Mehr 1338 = 100)

1337	Old Series	New Series
Mehr	100	100
Aban	103	102
Azar	105	104
Dey	107	105
Bahman	109	107
Esfand	114	113
1338		
Farvardin	117	117
Ordibehesht	119	116
Khordad	117	112
Tir		110
Mordad		109
Shahrivar		110
Mehr		111
Aban		114
Azar		116

Source: BMI Bulletins

Prepared by: Economic Bureau, Plan Organization

Annex V-I

Cost of Living and its Components

(1327 - 1337)

Year to Year Change in %s

	Food	Rent	Fuel and Light	Clothing	Misc.	General	General without Rent
1327	–	–	–	–	–	–	–
1328	+ 1	+15	- 2	-12	+ 6	+ 3	- 2
1329	-22	+ 2	-24	-18	-21	-17	-22
1330	+ 9	+ 7	+ 8	+16	+ 1	+ 9	+10
1331	+ 9	+ 3	+ 8	+ 5	–	+ 7	+ 7
1332	+ 9	+ 3	+23	+14	+ 1	+ 8	+11
1333	+15	+26	+23	+13	+16	+17	+16
1334	- 1	+15	-21	+ 3	+ 2	+ 2	- 4
1335	+ 7	+14	+15	+ 3	+ 4	+ 9	+ 4
1336	+ 2	+ 8	+10	+ 5	+ 8	+ 4	+ 4
1337	- 3	+15	- 2	+ 4	+ 1	+ 4	- 1
Yearly Average	+ 2%	+10.4%	+2.6%	+1.8%	+1.8%	+ 4%	+ 2%

Source **BMI Bulletins**

Prepared by: Economic Bureau, Plan Organization

Annex V-2:a

Price Index of Imported Goods

(1334 = 100)

	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337
Index	74	65	71	76	88	102	108	100	93	83	82
Year-to-year: %	-	-19	+9	+7	+11	+16	+6	-7	-7	-11	-1

Source: **BMI Bulletins**

Prepared by: Economic Bureau, Plan Organization.

Annex V-2:b

Price Index of Goods Domestically Produced and Consumed

(1334 = 100)

	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337
Index	87	77	66	71	76	91	107	100	107	112	118
Year-to-year: %	-	-6	-14	+8	+7	+20	+18	-7	+7	+5	+5

Source: **BMI Bulletins**

Prepared by: Economic Bureau, Plan Organization

Annex VI

Balance of Payments (1333-1337)

(Million of Dollars)

	1333	1334	1335	1336	1337
Receipts					
1. Exports other than Oil	108.3[a]	82.1[a]	89.6	98.4	86.3
2. Oil Revenue	18.5	79.8	140.2[a]	207.8[a]	265.8[b]
3. Foreign Exchange Purchases from Consortium	11.9	46.7	40.5	48.2	74.2
Total Exchange Earnings	138.9	208.6	270.3	354.4	426.3
Year-to-year % Changes	-	+50.2	+29.6	+31.1	+20.3
4. Foreign Aid & Loans	50.0	71.8	86.8	116.5	57.2
Total:	188.9	280.4	357.1	470.9	483.5
Payments					
1. Imports	138.2	206.7	229.6	280.2	370.7
2. Net Commercial Transactions	5.4[c]	6.9[c]	18.1[c]	9.1	2.7
3. Public Exchange Expenditures	-	-	-	2.9	1.0
4. Plan Organization Exchange Expenditures	-	30.3	34.0[d]	53.1	63.3
5. NIOC Exchange Expenditures	2.1	6.1	18.0	19.3	21.1
Total Imports	145.7	250.0	299.7	364.6	458.8
Year-to-Year % Changes	-	+71.6	+19.9	+21.7	+25.8
6. Debt Service	-	8.8	3.2	-	77.2
7. Change in Foreign Exchange Reserves	4.7	5.6	14.3	60.0	-49.2
8. Misc.errors and ommissions[e]	38.5	16.0	39.9	46.3	- 3.3
Total:	188.9	280.4	357.1	470.9	483.5

[a] Including NIOC Oil Exports

[b] Includes $25 million of Oil bonus

[c] Includes direct expenditures of Government

[d] Budget Bureau, Plan Organization

[e] The actuals include the utilization of foreign debt. No breakdown is available as to how much of it is service and amortization payments.

Source: BMI Yearly Balance Sheets.

Prepared by: Economic Bureau, Plan Organization

Annex VII

Gold and Foreign Exchange Reserves* of Iran (1330-1337)

(Million Dollars)

	End of 1330	1331	1332	1333	1334	1335	1336**	1337
Blocked for currency backing	139.1	139.1	152.1	139.1	139.1	153.9	86.8**	111.2
Non-blocked	55.7	35.0	52.0	71.2	70.0	64.9	189.7	117.0
Total:	194.8	174.1	204.1	210.3	209.1	218.8	276.5	228.2
Difference from Previous Year.	-	-20.7	+30.0	+6.2	-1.2	+9.7	+57.7	-48.3

* Excluding contributions to IMF and other similar contributions.

** In 1336, the Rial was officially revalued from 32.5 to 75 Rls. = $.

Source: BMI Bulletins

Prepared by: Economic Bureau, Plan Organization.

Annex VIII

Consolidated Account of the Banking System (1327-1337)
(Billion Rials)

	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337
Assets:											
(a) Advances to Private Sector	4.3	4.7	5.3	5.1	5.4	6.2	7.6	9.1	10.1	14.1	23.7
(b) Advances to Public Sector	5.4	6.1	7.3	9.0	12.4	17.0	19.0	19.2	20.8	20.7	26.7
(c) Net Foreign Assets	n.a.	n.a.	n.a.	7.5	7.2	7.6	10.6	9.7	9.9	21.2	17.5
Total	n.a.	n.a.	n.a.	21.6	25.0	30.8	37.2	38.0	40.8	56.7 *	67.9
Liabilities:											
(a) Money ** Supply to the Public.	11.3	10.7	13.3	13.5	17.1	20.1	22.7	23.7	27.9	34.0	40.9
(b) Govt. Demand Deposit	1.4	1.7	1.3	1.0	1.1	2.4	2.4	3.1	2.6	4.7	6.1
(c) Time and Savings Deposits***	1.9	2.0	2.5	2.9	3.3	4.2	4.6	5.3	6.4	8.3	11.0
Total a, b and c	14.6	14.4	17.1	17.4	21.5	26.7	29.7	32.1	36.9	47.0	58.0
(d) Unclassified Liabilities and Errors.	n.a.	n.a.	n.a.	4.2	3.5	4.1	7.5	5.9	3.9	9.7	9.9
Total	n.a.	n.a.	n.a.	21.6	25.0	30.8	37.2	38.0	40.8	56.7	67.9

End of year figures - All figures rounded.

* From 1336 onward, the official buying rate of exchange was changed from 32.5 to 75.0 rials per dollar.

** Includes physical currency and private demand deposits.

*** Includes private, public and savings accounts.

Source: BMI Bulletins and BMI Office of Economic Research and Statistics.

Prepared by: Economic Bureau, Plan Organization.

Deposit Banks Compared with the National Bank

(BMI) 1336-1338

End of Khordad		1336	1337	1338
		(Billion Rials)		
Deposit Banks:	Cash	2.09	3.44	4.57
	Demand Deposits	3.30	5.10	8.57
	Time Deposits	0.32	0.38	2.11
	(Excess Cash)	(1.58)	(2.66)	(3.18)
	Advances	5.01	7.22	14.54
National Bank: (BMI)	Private demand deposits	11.11	13.85	16.00
	Private time deposits	1.07	2.29	1.45
	Private advances	7.41	10.46	13.56
		(Percent)		
Deposit Banks as percent of National Bank:				
	Demand deposits	29.8	36.8	53.5
	Time depostis	29.9	16.7	145.5
	Advances	67.6	69.0	107.2
Ratio of advances to "deposits"[1]:				
	Deposit Banks	130	123	114
	National Bank	56	57	72

[1] "Deposits" equal demand deposits plus twice time deposits.

Source: Compilation by IBRD Mission based on "International Financial Statistics".

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